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Memorandum

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Date: June 14, 2012

Subject: Programmatic Permitting Strategy for the Lower Feather River Corridor Management Plan

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This technical memorandum is a refinement of the February 9, 2011 *Letter Report Regarding the California Department of Water Resources Corridor Management Plan Permitting Strategy* (Phase 1 Letter Report) based on comments received from agency representatives and other members of the Lower Feather River Corridor Management Plan (LFR CMP) Permitting Subcommittee.

The Phase 1 Letter Report presented an array of potential mechanisms for securing programmatic compliance with federal and state regulations, for maintenance and restoration activities associated with the California Department of Water Resources (DWR) LFR CMP from the Sutter Bypass to the Yuba River. However, at the time the Phase 1 Letter Report was prepared, limited information was available regarding the maintenance and restoration activities that would be included in the programmatic permits being sought for the LFR CMP.

The Phase 1 Letter Report has subsequently been refined through a three step process:

(1) develop a preliminary project description;

(2) determine additional information required for development of the final permitting strategy; and

(3) revise the set of potential permitting mechanisms based on the preliminary project description and input from the permitting agencies.

From the limited project information available, AECOM worked in collaboration with DWR and the Permitting Subcommittee to develop a preliminary permitting project description that identified the types of activities and the applicants that would be included in the LFR CMP programmatic permits. This conceptual permitting project description is described below, and was used as the basis for narrowing down the range of programmatic permitting options presented in the Phase 1 Letter Report. The following conceptual permitting strategy outlines the authorizations that would be required for the activities described in the preliminary permitting project description, potential mechanisms for obtaining the associated permits, and approximate permitting timelines.

The Permitting Subcommittee agency representatives have requested additional information, as discussed below, to allow them to determine which of the available permitting mechanisms

would be used by each agency to authorize the proposed activities. Some of this information will be provided in the CMP document, based on the results of the hydraulic modeling. The remainder of the information (conservation measures, routine maintenance project locations and limits, etc.) will be provided by DWR. Once the detailed project information has been submitted to the permitting agencies and they have responded with the selected permitting approach, AECOM will prepare an LFR CMP permit strategy flowchart to be appended to the LFR CMP document.

Please see Appendix A for definitions of the acronyms used in this memo.

PRELIMINARY PROJECT DESCRIPTION FOR PROGRAMMATIC PERMITTING

The project description below was prepared in coordination with the LFR CMP Work Group Permitting Subcommittee.

ACTIVITIES FOR PROGRAMMATIC PERMITTING

If possible, programmatic permits should provide authorization for the activities listed in this project description that would be conducted by DWR, the California Department of Fish and Game (DFG), the local levee maintaining agencies (Reclamation District [RD] 784, RD 1001, Levee District 1, and Marysville Levee District), the Three Rivers Levee Improvement Authority, and the Sutter Butte Flood Control Agency.

RESTORATION

- Enhancement
  - removal of invasive species, and
  - increase species density and diversity based on plant communities that occurred historically at the specific location.
- Aquatic-type restoration, terrestrial-type restoration, wetlands-type restoration, and Bank Swallow habitat creation [Note: each of these would have to be described in some detail to match historic topographic, hydrologic, and plant community conditions]. Restoration may include earth moving to modify floodplains, create floodplain swales, or to remove blockages to flow, and other enhancement and restoration to promote listed species and other biological resources conservation and recovery. The restoration activity descriptions for the permit applications would include:
  - optimal locations for each habitat type,
  - anticipated acreage for each activity type,
  - the impacts of implementing the various types of restoration, and
  - how these impacts would be mitigated.

Note: Restoration activities permitted under the LFR CMP would serve the purpose of providing advance mitigation, possibly through the establishment of a Memorandum of Understanding (MOU), in-lieu fee program, or umbrella banking instrument with regulatory agencies. The MOU or other legal instrument would provide "safe-harbor like" ability to maintain channel capacity for flood control and public safety needs provided the ecosystem functions are kept above baseline.

ROUTINE MAINTENANCE

As defined in the January 2011 "Streambed Alteration Agreement Between California Department of Fish and Game and the Division of Flood Management of the Department of Water Resources for Routing Maintenance of Flood Control Projects by the Sacramento and Sutter Maintenance Yards" [Routine Maintenance Streambed Alteration Agreement, RMSAA]).

"Routine maintenance work" means work performed regularly (approximately every 1 to 5 years), as required to safely convey design flows and promote ecosystem functions, in the stream zones within identified areas. DWR performs routine maintenance work to maintain the functional and structural integrity of its facilities. Routine maintenance work includes, but is not limited to, the following: removing debris, sediment, vegetation, rubbish, downed trees, and other material that could obstruct the natural flow of water; controlling weeds, grasses, emergent vegetation, and woody vegetation; maintaining restoration and mitigation areas; controlling burrowing rodents, grouting rodent holes; dragging, track walking, and burning levee slopes; repairing gates, barricades, and small structures; making repairs to control erosion and stabilize banks; maintaining crown and toe roads as well as fire breaks; repairing bridges and culverts; conducting minor geotechnical sampling, and other work necessary to maintain the functional and structural integrity of DWR streams or DWR facilities.

NON-ROUTINE MAINTENANCE

- Large sediment and debris removal and placement (with defined areas for disposal, such as a landside seepage berm, or on top of existing maintenance roads). The location, quantity of material, and frequency of activity for anticipated sediment removal and placement locations would be described in the programmatic permit applications. Additionally, the environmental baseline conditions, potential impacts and mitigation measures would have to be defined for each location where sediment is to be removed and placed.

- Bank protection and levee erosion repairs. Note: Provisions similar to those applied to DWR's Small Erosion Repair Program Phase 1 projects could be applied to CMP erosion repair activities, e.g., size limits, bioengineering design parameters and resource-specific conservation measures.

Note: Recreation should be addressed in the CMP, but does not lend itself to programmatic permitting. Most recreation facilities would be site-specific and would be built pursuant to individual permits. DWR staff believe that including recreation in the programmatic permitting would overly complicate the permitting process when individual permits would be a workable alternative. Furthermore, DWR staff believe there will not be sufficient need for programmatic permits for Agriculture, land use designation changes, and scientific research to justify including them in the programmatic permitting for the CMP. Permits for the most part either would not be needed or would be relatively easy to get, so complicating the programmatic permitting process with these added elements would not be justified.

ADDITIONAL INFORMATION REQUIRED FOR DEVELOPMENT OF FINAL PERMITTING STRATEGY

In their comments on the project description presented above, the Permitting Subcommittee agency representatives stipulated that further development of the permitting strategy would require more detailed descriptions of the activities to be permitted, including:

- Proposed project locations
- Size: permanent and temporary impact areas (in acres and linear feet)
- Anticipated frequency
- Volume (in cubic yards) and types (e.g., soil, riprap, and grouting) of material that would be excavated and/or used as fill material
- Method used to conduct work (e.g., vegetation removal via mowing versus vegetation removal via dozing)
- Description of proposed habitat restoration activities, including restoration goals and "targets" such as identification of species, life-stages, and habitat types to be addressed
- What work would occur below the ordinary high water mark (OHWM)
- Timing
- List of any known conservation measures/parameters/thresholds that would be applied (e.g., established work windows based on sensitive species needs, established project and annual acreage, and linear impact thresholds)
- Length of time the LFR CMP would be in effect
- Length of time for which programmatic permit coverage would be sought
- Statement acknowledging that while passive recreation would be allowed, the required construction for recreation-related project activities (trails, fishing and boating access, etc.) would not be included in the maintenance/restoration programmatic permitting project description and would require project-by-project permitting
- The planning, acquisition, development, and operation components of the scope of work
- The precise location and boundaries of the LFR CMP, preferably on a topographic map
- A clearly written statement of the project objectives, which should include the underlying purpose of the project and a general description of the project's technical, economic, and environmental characteristics
- The physical environmental conditions in the vicinity of the project

Agencies with regulatory authority over the proposed maintenance and restoration activities include the U.S. Army Corps of Engineers (USACE) Regulatory Division, Central Valley

Regional Water Quality Control Board (Central Valley RWQCB), DFG, U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), State Historic Preservation Office (SHPO), California State Lands Commission (SLC), and Central Valley Flood Protection Board (CVFPB).

This memo summarizes the regulatory mechanisms that could be used by the permitting agencies to provide programmatic authorizations for the LFR CMP. It compares different approaches to achieving regulatory compliance and is intended to document and facilitate ongoing discussions between DWR and the agencies to determine the most appropriate permitting strategies. These approaches have been developed based on a review of existing permit programs and policies for similar permitting efforts, and through ongoing discussions with agency representatives.

POTENTIAL PERMITTING MECHANISMS

This section presents the potential permitting mechanisms for federal and state authorizations organized by agency. The array of mechanisms has been narrowed from the list provided in the Phase 1 Letter Report, based on the preliminary permitting project description and input from the permitting agencies. The final permitting strategy will be developed in collaboration with the permitting subcommittee by identifying the most appropriate permitting mechanism for each agency based on the additional information as described above.

FEDERAL AUTHORIZATIONS

U.S. ARMY CORPS OF ENGINEERS

CLEAN WATER ACT SECTION 404, RIVERS AND HARBORS ACT SECTION 10, AND NATIONAL ENVIRONMENTAL POLICY ACT

Section 404 of the Clean Water Act (CWA) prohibits the discharge of dredged or fill materials into waters of the United States without USACE authorization. Section 10 of the Rivers and Harbors Act of 1899 (RHA) requires USACE authorization for the construction of any structure or work in or over any traditional navigable waters of the United States. Structures or work outside the limits defined for navigable waters of the United States require a RHA section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, rechannelization, or any other modification of a navigable water of the United States, and applies to all structures, from the smallest floating dock to the largest commercial undertaking. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent or semi-permanent obstacle or obstruction. The USACE has indicated that, in addition to authorization under CWA section 404, authorization under RHA section 10 would be required for activities on the Lower Feather River downstream of the Marysville railroad crossing.

Based on input received on the Phase 1 Letter Report, USACE could develop a Regional General Permit (RGP) for the LFR CMP, under the authority of CWA section 404 (33 U.S. Code [USC] section 1344) and RHA section 10 (33 USC section 403), in accordance with provisions of *Regulatory Programs of the Corps of Engineers*, 33 Code of Federal Regulations

(CFR) section 323.2(h) for activities that are substantially similar in nature and cause only minimal individual and cumulative environmental impacts.

An RGP is issued by a USACE district or division and authorizes a class of activities within a geographic region that are similar in nature and have minimal individual and cumulative environmental effects. Overall RGPs streamline the USACE permitting process by avoiding the need to obtain separate permits on a project-by-project basis. To qualify for authorization under an RGP permit, applicants must meet the general and special conditions established for that RGP. Once an RGP is issued, applicants can use the permit, if the stated conditions are met. RGPs typically require project-by-project notification to USACE, and USACE issues a notice to proceed if the terms of the RGP are met. RGP processing timelines are difficult to anticipate and are based on agency coordination and workloads; however, a 1- to 2-year time frame from pre-application coordination to RGP issuance would be a reasonable expectation.

USACE has indicated that to determine whether development of an RGP may be considered for the activities proposed, they would require more specific project information, as outlined above. USACE may consider developing an RGP for the work; however, because of the limited number of section 404 and section 10 permits that have been issued on the Lower Feather River over the last several years for the types of activities proposed, the utility of an RGP in decreasing USACE workload may be questionable. Additionally, it is unclear what portion of the proposed activities would occur below the OHWM (the limit of USACE's jurisdiction in the Lower Feather River), and what portion of the activities occurring below the OHWM would be regulated under either CWA section 404 or RHA section 10. USACE would consider the potential frequency of use of an RGP in their determination of whether RGP establishment would be warranted. Also, an RGP would not cover activities outside of USACE's jurisdiction (i.e., above OHWM). As described below, for activities outside USACE's jurisdiction, DWR would be responsible to consult with the USFWS under section 10 of the federal Endangered Species Act (ESA) of 1973, as amended (16 USC section 1531 et. seq.), unless there is another federal nexus that would enable consultation under section 7.

For the proposed LFR CMP activities to be authorized by an RGP, the activities must result in no more than a minimal impact to the aquatic system, both individually and cumulatively. An RGP would include limits on the cumulative loss of waters resulting from permitted activities allowed in a single year. Those limits would be defined by the type and location of the activity and associated impacts. In general, the limit of the cumulative impacts likely would be between 1 and 10 acres, or may be defined instead by linear feet.

There would be a 5-year maximum time limit on any permits issued, regardless of type, renewable at USACE's discretion.

Compliance with federal regulations, including but not limited to those identified below, would be documented by USACE and required before issuance of the RGP:

- ESA
- National Environmental Policy Act (NEPA)
- Section 106 of the National Historic Preservation Act (NHPA)
- Section 401 of the CWA–Note: 401 certification could be provided on a project-by-project basis if the RWQCB does not certify an RGP

- Bald and Golden Eagle Protection Act (BGEPA)
- Fish and Wildlife Coordination Act (FWCA)
- Magnuson-Stevens Fishery Conservation and Management Act (MSA) for Essential Fish Habitat;
- Marine Mammal Protection Act (MMPA)
- Migratory Bird Treaty Act (MBTA)

U.S. Fish and Wildlife Service and National Marine Fisheries Service

LFR CMP activities not regulated by USACE under either CWA section 404 or RHA section 10, and for which there is no other federal nexus, likely would require preparation of a Habitat Conservation Plan (HCP) pursuant to section 10 of the ESA if those activities may result in "take" of federally listed species or adverse modification of designated critical habitat. The ESA section 10 and section 7 processes are addressed in detail under the discussion of USFWS and NMFS authorizations below.

If an HCP was pursued for the LFR CMP, the CWA section 404/RHA section10 permit action by USACE could be included as an additional element to be consulted on through the section 7 (internal) consultation conducted for the HCP. This would allow the USFWS and NMFS to conduct one formal consultation that would incorporate the actions for the HCP and any related and supportive federal actions into one biological opinion. The biological opinion developed for the HCP also could incorporate the necessary biological analysis on the federal action as well as the actions in the HCP to help eliminate duplication. Thus, the single biological opinion issued by the Services could address both the federal action and the non-federal action and would include an incidental take statement that authorizes any incidental take by the federal agency and an incidental take permit that authorizes any incidental take by the ESA section 10 permittee.

For maintenance and restoration activities regulated under CWA section 404 and/or RHA section 10 that are not covered under an HCP, USACE would initiate ESA section 7, NHPA and MSA consultations, and initiate coordination under the MMPA, MBTA and BGEPA as part of the RGP permit process. Compliance with the FWCA could be achieved by preparation of a FWCA report by USFWS; compliance with the MSA could be achieved through incorporation of RGP special conditions requiring implementation of Essential Fish Habitat conservation recommendations provided in the NMFS programmatic Biological Opinion (BO).

Some of the maintenance and restoration activities proposed for the LFR CMP may not fall within USACE's regulatory authority under CWA section 404 but may still be regulated under RHA section 10. The Lower Feather River is considered a Navigable Water of the United States and is therefore subject to regulation under RHA section 10 of the RHA in addition to CWA section 404. Under RHA section 10, a broader range of activities are regulated than under CWA section 404. Therefore, maintenance activities such as vegetation management, which may not be subject to USACE jurisdiction under CWA section 404, may in some cases be subject to regulation under RHA section 10.

There is another avenue which could be explored for a section 7 nexus. The Sacramento River Flood Control Project Supplemental Operations and Maintenance (O&M) manuals that

DWR and the local maintaining agencies use as directives for maintenance of the flood control system may require initiation of section 7 consultation for development or revisions. If development or revisions to the O&M manuals require discretionary action by USACE, this could potentially provide a section 7 nexus for LFR CMP maintenance activities. This possibility would need to be discussed with and evaluated by the USACE Construction Operations Division and possibly by their Office of Counsel.

Compliance with the NEPA could be achieved by USACE through preparation of an environmental assessment as part of the RGP process. Because issuance of an RGP would require project-level and cumulative impacts to be minimal, a finding of no significant impact would be anticipated. If through the environmental assessment USACE determined that the project may result in significant environmental effects, preparation of an environmental impact statement would be required for NEPA compliance.

ESA, FWCA, MSA, MMPA, MBTA, AND BGEPA

Once a fish or wildlife species is listed as endangered or threatened under the ESA, the act prohibits anyone from taking the species. To “take” a species means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Habitat modification or degradation that results in death or injury to listed species by impairing behavioral patterns constitutes take. The ESA also prohibits the destruction or adverse modification of designated critical habitat. Designated critical habitat encompasses areas that are essential to the conservation of threatened and endangered species, and includes geographic areas “on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection.” USFWS administers the ESA for terrestrial and freshwater species, and NMFS administers the ESA for marine species and anadromous fish species. ESA section 7(a)(2) requires federal agencies that are undertaking, funding, permitting, or authorizing actions to consult with USFWS and/or NMFS to evaluate whether these actions would affect listed species or designated critical habitat.

The formal section 7 consultation period is 135 days; however, this time frame may vary based on agency workload. Based on this consultation, USFWS and/or NMFS may issue a BO, stating whether or not the federal action would be likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. Non-jeopardy BOs include an incidental take statement, describing the amount of take that is allowed to occur for otherwise lawful activities. BOs also include “reasonable and prudent measures” that USFWS and/or NMFS believes are necessary and appropriate to minimize the effects of the project, as well as terms and conditions to minimize incidental take or avoid take altogether.

As part of the issuance of an RGP, which would constitute a federal nexus for at least a portion of the project, USACE would initiate section 7 consultation with both USFWS and NMFS. Federal action agencies may request multi-action or "ecosystem-based" programmatic consultations. Programmatic consultations evaluate the potential for related agency actions to affect listed and proposed species and designated and proposed critical habitat. Programmatic consultations often are based on a federal agency’s proposal to apply specified standards or design criteria to future proposed actions. Programmatic consultations can streamline the section 7 consultation process because much of the effects analysis is completed one time up front, rather than repeatedly for each separate action. Furthermore, because the programmatic analysis incorporates the anticipated effects of the federal agency’s future projects, the

process for completing consultation for future actions proposed under the programmatic consultation may be shortened. Based on similar program-level authorizations throughout California for efforts comparable in scale and complexity to the activities being considered under the LFR CMP, it is anticipated that the consultation effort for the proposed maintenance and restoration activities would result in a programmatic BO or a combined programmatic BO and not likely to adversely affect letter from each of these agencies. The NMFS programmatic BO would incorporate conservation recommendations for Essential Fish Habitat, to comply with the MSA.

Coordination with USFWS and NMFS would include a discussion of potential impacts to any species covered by the MMPA and the MBTA. The FWCA provides the basic authority for USFWS involvement in evaluating impacts to fish and wildlife from proposed water resource development projects, and also provides for input from other resource agencies, in this case NMFS and DFG. USFWS likely would provide their comments in the form of an FWCA report. NMFS likely would provide their comments by letter, in response to USACE's request for initiation of section 7 consultation. The concerns and/or recommendations of either agency would be addressed as necessary through project modifications, conservation measures, or other means. Once issued, the USFWS and NMFS section 7 authorizations likely would be valid for a period of 5 years (i.e., for the duration of the RGP). At USACE's request, USFWS and NMFS (the Services) could review the project for reauthorization in 5 years, concurrent with a proposed renewal of the RGP.

As indicated above, if it was determined that any of the LFR CMP activities was not within the USACE's RGP scope of analysis, if another federal nexus was not available, ESA compliance would need to be achieved through preparation of an HCP, pursuant to ESA section 10. HCPs are planning documents prepared by non-federal parties as part of an application for an incidental take permit. An HCP assesses the impacts of a proposed action on species (which may include federal and state-listed species and candidate species), proposes measures to monitor, minimize, and mitigate these impacts, and analyzes action alternatives. On approval of an HCP, the Services issue an incidental take permit, which allows the non-federal party to legally proceed with an activity that otherwise will result in unlawful take of a protected species. In addition to the incidental take permit, the Services complete a BO (internal) under section 7 and finalize the NEPA analysis documents.

Although HCPs vary in scale and scope, they do provide an approach to address a set of actions across a broad geographic region that evaluates impacts on a range of ecosystems, habitats, and species. Just as the size, configuration, and location of HCPs varies, so does the permit duration. The permit duration takes into account both the biological impacts resulting from the proposed land use and economic developmental differences, and typically ranges from 30 to 50 years.

The HCP development and permit processing phases do not have statutory time frames but can be roughly estimated as taking 1–5 years in the Sacramento region. Based on discussions with USFWS staff (Hobbs, pers. comm., 2010, 2011), it is conceivable that the LFR CMP could qualify for a "low-effect" HCP. However, USFWS staff emphasized that low effect projects are categorically excluded from NEPA, and questioned whether this may require that the projects also be exempt from the California Environmental Quality Act (CEQA). Cases may exist where projects that are not exempt from CEQA are nonetheless categorically excluded from NEPA. To enable the formal screening process for a low effect HCP, DWR would need to provide a list of proposed LFR CMP maintenance and restoration activities to USFWS and NMFS.

The determination of whether an HCP qualifies for the low effect category must be based on its anticipated impacts before implementation of mitigation. Low-effect HCPs are those involving: (1) minor or negligible effects on federally listed, proposed, or candidate species and their habitats covered under the HCP; and (2) minor or negligible effects on other environmental values or resources. Low-effect incidental take permits are those permits that, despite their authorization of some small level of incidental take, individually and cumulatively have a minor or negligible effect on the species covered in the HCP. A timeline for low-effect HCPs is difficult to estimate, but is expected to require less time for HCP development and permit processing relative to a standard HCP. USFWS staff indicated that they are supportive of the CMP approach and would attempt to facilitate timely HCP development for this effort as their workload allows.

An LFR CMP Permitting Subcommittee meeting was held on November 15, 2011, to discuss the HCP and NCCP processes and explore HCP and NCCP possibilities for the LFR CMP. The subcommittee discussed the possibility of adding the LFR CMP onto the HCP/Natural Community Conservation Plan (NCCP) currently being developed in Yuba and Sutter counties. It was pointed out that timing issues could occur with this approach, as delays in the overall HCP development would result in delays for LFR CMP authorization and implementation. DFG recommended against joining an existing NCCP development effort. Development of a separate HCP/NCCP for the LFR CMP area was determined to be a preferred approach. It was emphasized that when multiple HCP/NCCPs exist in the same area, integration is important. Consistent conservation strategies for species should be provided, although the permitted activities are likely to be different. Ultimately, different plans covering the same area cannot conflict in their coverage over the same habitat. DFG works with applicants to develop NCCPs jointly with HCPs to provide one planning process and document. However, in some cases, a local government may decide not to pursue the higher conservation standard of an NCCP and to work instead with DFG to provide a state regional incidental take permit to accompany the federal HCP. Thus, not all HCPs comply with NCCP standards, as described in the Natural Communities Conservation Planning section below.

Whenever practical, the Services give consideration to programmatic or ecoregion consultation with federal agencies that have major programs in the HCP areas, to facilitate overall consultation and recovery actions for the species involved. This type of consultation would involve programmatic review of the agencies' activities and would be most effective if conducted simultaneously with development of the HCP. Such simultaneous consideration of both federal and non-federal programs could (1) assist in assessing overall effects on a species/group of species/ ecosystem from multiple actions; (2) result in a better determination of the respective roles of all the parties in conserving the species/ecosystem, (3) assist in determining the priority of all proposed actions for use of any "resource cushion" that may exist, and (4) demonstrate that all parties are being provided equal consideration at equal speed (programmatic consultations do not have applicants and are subject to mutually agreed-on time frames).

SAFE HARBOR AGREEMENT

A Safe Harbor Agreement (SHA) is a voluntary agreement between private or non-federal land owners and USFWS. NMFS does not issue SHAs. Under an SHA, a land owner enhances their property in ways which benefit listed species and is issued a Enhancement of Survival Permit under the authority of ESA section 10(a)(1)(A). This permit authorizes incidental take of species that may result from actions undertaken by the landowner under the SHA, which could include returning the property to the baseline conditions at the end of the agreement.

Obtaining permits using an SHA is of limited applicability for DWR. Because an SHA can be entered into only by the landowner, a maintaining agency with an easement for maintenance (typical for DWR) cannot obtain an SHA. The agreement has to be initiated by the landowner. An SHA typically takes 6–9 months to develop, although complex agreements may take longer.

USE OF MOUS FOR ESA COMPLIANCE

Previously established MOUs and associated BOs for the Yolo Basin Wetlands Project, the Sacramento River National Wildlife Refuge, the Sacramento River and Feather River Wildlife Areas, and the O'Connor Lakes Unit Riparian Restoration Project within the Feather River Wildlife Area (DFG et al. 1994, USFWS and DFG 2004, DFG and DWR 2006, USFWS 2005) have served as effective means of formally documenting interagency agreements to mutually manage, restore, and enhance lands that contain facilities maintained for flood protection purposes and also managed for fish, wildlife, and plants. These MOUs confirm the agencies' commitment to approach authorization strategies for ongoing flood facilities maintenance in a collaborative manner that both ensures adequate protection for sensitive aquatic and other important fish and wildlife resources and minimizes flood-related risks to public safety. Specifically, these MOUs clarify the agencies' understanding, agreements, representations, and commitments to resolving land management issues in areas where their maintenance and management responsibilities overlap. It is anticipated that the agencies will continue to collaborate to develop similar management and authorization strategies through establishment of MOUs, programmatic authorizations, and other available regulatory mechanisms.

The *MOU between USFWS regarding the Sacramento River National Wildlife Refuge and DFG regarding the Sacramento River Wildlife Area and Feather River Wildlife Area and State Parks Northern Buttes District regarding the Sacramento River State Parks* (USFWS and DFG 2004) provided a creative mechanism for obtaining a section 7 nexus for ESA compliance for otherwise non-federal activities. USFWS conducted an internal section 7 consultation whereby a USFWS Refuge conducted a section 7 consultation on behalf of the MOU signatories. Based on input by USFWS staff at recent LFR CMP meetings, there are legal implications with internal section 7 consultations that have resulted in USFWS no longer supporting this option.

PROS AND CONS OF ESA COMPLIANCE MECHANISMS FOR THE LFR CMP

Table 1 summarizes the pros and cons of the potential mechanisms for ESA compliance for the LFR CMP. It is important to note that the table does not provide an exhaustive list of all the pros and cons associated with each of the potential compliance mechanisms presented. The pros and cons provided in the table are intended simply for purposes of comparison of the ESA compliance mechanisms presented. The USACE 404/10 and USFWS and NMFS ESA authorizations constitute the critical path authorizations for the LFR CMP. The USACE 404/10 and USFWS and NMFS ESA processes would best be accomplished in parallel.

Under the provisions of the ESA, the threshold requiring consultation with USFWS is lower for section 7 than for section 10. Under section 7, federal agencies are required to consult with USFWS if project activities "may affect" a listed species, whereas under section 10, non-federal entities are required to obtain incidental take authorization if project activities would result in take of a listed species or adverse modification of designated critical habitat. As discussed above, a detailed description of the proposed LFR CMP maintenance and restoration activities and avoidance and minimization measures is being developed as part of the CMP document development and through ongoing coordination between DWR and

AECOM. This detailed permitting project description will be submitted to USACE, USFWS, and NMFS for their review and recommendations regarding the appropriate LFR CMP-specific 404/10, ESA authorization, and compensatory mitigation approaches.

Table 1
Pros and Cons of Potential Federal ESA Compliance Mechanisms

Potential ESA Compliance Mechanisms	Pros	Cons	Timeframe[1]
Section 7 Consultation	Statutory timeline exists USACE conducts consultation Biological Assessment (BA) preparation typically less cumbersome than Habitat Conservation Plan (HCP) preparation	Requires federal nexus (e.g., 404 permit) Some Lower Feather River Corridor Management Plan (LFR CMP) activities may not be covered and may require HCP	Statutory time frame:120 days from initiation of consultation
HCP	Provides full coverage for included LFR CMP projects May allow for integration of waters of the United States mitigation Longer term permit than via section 7 consultation Provides coverage for species that may be listed during the life of the permit Offers assurances of compensation, coverage, funding	No statutory timeline High level of effort required for HCP preparation/ authorization (requires development of an Implementation Agreement, NEPA compliance, etc.) Requires assured funding (listed as a con because in some cases DWR has not been able to provide assured funding for their compensation projects)	Estimate: 1–5 years
Low-Effect HCP	Possibly less processing time involved than standard HCP Less cumbersome application process than standard HCP	No statutory timeline Project must be categorically excluded under NEPA, which may require CEQA exemption	Estimate: 1–2 years
Combined section 7 Consultation/HCP NOTE: Section 7 consultation would be for projects with a federal nexus, HCP would cover projects for which there is no federal nexus	Provides full ESA coverage for included LFR CMP projects	No statutory timeline for HCP Would require preparation of BA and HCP; involves coordination with two branches of USFWS (USFWS has indicated they would make sure this effort was consolidated)	Estimate: 1–5 years, assuming standard HCP

Table 1
Pros and Cons of Potential Federal ESA Compliance Mechanisms

Potential ESA Compliance Mechanisms	Pros	Cons	Timeframe[1]
Modify existing "2004 Memorandum of Understanding" (MOU) to include LFR CMP NOTE: USFWS is no longer supporting this option	Provides nexus for section 7 consultation Potentially less time-consuming than HCP	Requires USFWS to agree to provide federal nexus via internal section 7 consultation Would require amendment to 2005 BO, which would require preparation of a BA	Estimate: 9 months (does not include BO amendment) BO amendment: 135 days from initiation of consultation
Establish new MOU (similar to USFWS and DFG 2004 MOU) to provide nexus for section 7 consultation NOTE: USFWS does not support this option	Provides nexus for section 7 consultation Potentially less time-consuming than HCP	Requires USFWS to agree to provide federal nexus via internal section 7 consultation	Estimate: 1 year (does not include section 7 consultation) Section 7 consultation: 120 days from initiation of consultation

This table does not provide an exhaustive list of all pros and cons associated with each of the potential compliance mechanisms presented. The pros and cons provided in the table are intended simply for purposes of comparison of the ESA compliance mechanisms presented.

[1] The timeframe estimates included in this table are rough timelines provided simply for purposes of comparison. Timeframes can vary substantially based on agency workloads and staffing abilities, as well as DWR's ability to prepare and coordinate review of required supporting documents.

Source: Data compiled by AECOM in 2012

STATE AUTHORIZATIONS

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Projects by public agencies and private entities that are subject to discretionary approvals by government agencies must go through the environmental review process required by CEQA. CEQA defines a project as any activity that "may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment" (Public Resources Code section 21065). Projects potentially entailing discretionary approvals include activities directly undertaken by a public agency; activities supported, in whole or part, through financial assistance from public agencies; and activities that involve the issuance of a lease, permit, license, certificate, or other entitlement.

Consequently, a certified CEQA document is required for issuance of a section 401 water quality certification by the RWQCB or State Water Resources Control Board (SWRCB), streambed alteration agreement (SAA) by DFG, 2081 Incidental Take Permit from DFG if one is required, Master Lease from the State Lands Commission, and National Pollutant Discharge Elimination System (NPDES) permit or waiver from the RWQCB. A CEQA document also is required before DFG approval of an NCCP. Therefore, regional/programmatic permitting is greatly facilitated by related CEQA documents providing well-substantiated impact analyses and clearly defined and implementable avoidance, minimization, and mitigation measures.

It is anticipated that either a mitigated negative declaration (MND) or programmatic environmental impact report (PEIR) would be an appropriate CEQA document for the LFR CMP. Achieving CEQA compliance through an MND may be more limiting than a PEIR in that some of the proposed maintenance activities may not "fit" under an MND but may be adequately addressed under a PEIR.

As the designated lead agency, DWR would identify and prepare the appropriate CEQA document that would identify the scope of the project and probable environmental impacts associated with proposed maintenance and habitat restoration activities, as well as the aggregate and cumulative impact of the project to the extent that these impacts can be defined and are not speculative. In addition to providing CEQA coverage for 401 certification, streambed alteration agreement, Master Lease, NPDES permit, and California Endangered Species Act (CESA) permit (if needed), the CEQA document would provide an avenue for integration of management of cultural resources required for NHPA section 106 and would address potential program-level impacts to state-listed species, water quality, and lands within the SLC's jurisdiction.

In general, an MND can be completed in 4–9 months, depending on the complexity of the project and the timing of finalization of the project description. The anticipated time frame for preparation of an MND for the LFR CMP is approximately 9 months; completion of a PEIR for the LFR CMP is anticipated to take 12–18 months; these time frames may vary substantially, based on numerous factors such as agency workload and coordination requirements.

STATE HISTORIC PRESERVATION OFFICE

NATIONAL HISTORIC PRESERVATION ACT SECTION 106

NHPA section 106 requires federal agencies to take into account the effects of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. USACE would be required to comply with section 106 for issuance of an RGP, as this federal action would constitute an undertaking within the meaning of the implementing regulations for section 106 (Title 36, CFR Part 800.16[y]). For the proposed project, USACE and SHPO could execute a programmatic agreement (PA) using the process defined in 36 CFR Part 800.14 to satisfy compliance with section 106. This process allows deferred identification and management of cultural resources under an agreement document (36 CFR Part 800.4[b][2]). On execution (signing and approval) of the programmatic agreement by the consulting parties, section 106 is deemed complete for the purpose of permits and authorizations dependent on the section 106 process (36 CFR Part 800.14[b][2][iii]). Therefore, execution of the programmatic agreement would satisfy section 106 sufficiently to allow USACE to issue an RGP for the project and would allow DWR and USACE to either mitigate in advance of disturbance or defer identification and management of historic properties until specific sites required maintenance or habitat restoration.

The programmatic agreement would provide a process for performing an inventory of cultural resources within maintenance and restoration sites as they were identified, evaluating those resources, and resolving adverse effects on significant resources (historic properties). Notice would be required to other potential consulting parties, such as the interested public (local historic preservation organizations) and Native American tribes. USACE would provide notice by letter, identifying the nature of the federal action and inviting these parties to consult in development of the programmatic agreement. Coordination with other federal agencies providing permits and authorizations for the project would be performed to ensure that the

programmatic agreement identified these other undertakings, providing a unified compliance framework for section 106 for the project. The programmatic agreement would be valid for 5 years and could be renewed, at the discretion of USACE and SHPO, concurrent with renewal of the RGP.

Time frames for PA development vary, depending on the level of tribal and agency coordination required. Based on time frames for PA development for other projects in the region, development and execution of a PA for the LFR CMP is anticipated to be completed in 3–12 months. However, this time frame may vary substantially based on numerous factors, such as agency workload and coordination requirements.

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

CLEAN WATER ACT SECTION 401

Applicants seeking a federal permit under CWA section 404 also must obtain Water Quality Certification from the RWQCB, in accordance with CWA section 401. In California, the U.S. Environmental Protection Agency (EPA) has delegated authority to the RWQCBs to issue 401 certifications. Section 401 certification of the RGP would provide another level of streamlining to the LFR CMP. However, if the RGP is not certified under section 401, each maintenance and restoration project carried out under the RGP would require separate section 401 certification before initiation of project activities.

The RWQCB could develop a section 401 water quality certification to authorize the LFR CMP under CWA section 401, in tandem with the USACE's RGP. Central Valley RWQCB staff have indicated that programmatic water quality certifications issued by the Central Valley RWQCB typically have covered routine maintenance activities that fall within a specific threshold. They have requested that additional information be provided to allow the RWQCB to determine specific thresholds on the restoration, routine maintenance, and non-routine maintenance activities proposed under the LFR CMP for consideration of a programmatic water quality certification. Clarification has been requested regarding:

- proposed project locations;
- linear feet and anticipated frequency of levee repair activities to maintain levee structural integrity;
- volume (in cubic yards) and anticipated frequency of sediment removal activities;
- areal extent and anticipated frequency of vegetation removal and revegetation activities; and
- any habitat restoration activities, as related to waters of the United States and/or state, including created, restored or enhanced wetlands, riparian areas or streambeds.

In addition to information provided elsewhere in this memo, the RWQCB has requested that the project description be expanded to include:

- the planning, acquisition, development and operation components of the scope of work;
- the precise location and boundaries of the LFR CMP, preferably on a topographic map;

- a clearly written statement of the project objectives, which should include the underlying purpose of the project, and a general description of the project's technical, economic and environmental characteristics; and

- the physical environmental conditions in the vicinity of the project.

Issuance of the 401 water quality certification would require completion of the final CEQA document. The RWQCB or SWRCB would be a responsible agency under CEQA. In acting on issuance of the 401 certification, the RWQCB or SWRCB would rely on the CEQA document to prepare and issue its own findings regarding the project, and to decide whether or not to issue a water quality certification. A draft 401 certification would be circulated for 30 to 60 days for public review and comment. An additional 60 days may be required to schedule a Board meeting, if necessary. The 401 certification likely would be effective for 5 years, and may be renewed at the RWQCB or SWRCB's discretion, concurrent with renewal of the RGP.

Time frames for 401certification vary but would be anticipated to coincide with the associated USACE RGP processing timelines.

CLEAN WATER ACT SECTION 402

CWA section 402 prohibits certain discharges of stormwater containing pollutants, except in compliance with a NPDES permit (Title 33 USC sections 1311 and 1342(p); also referred to as CWA sections 301 and 402[p]). The CWA authorized EPA to delegate NPDES permit program authority to state governments, enabling states to perform many of the permitting, administrative, and enforcement aspects of the NPDES program. In California, the SWRCB has been authorized to implement the NPDES program, with EPA retaining oversight responsibilities.

Under California's NPDES program, projects that disturb 1 or more acres of soil or projects that disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the state's general permit for discharges of stormwater associated with construction activity (SWRCB Order No. 2009-0009-DWQ NPDES General Permit No. CAS000002, *Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities*) (Construction General Permit). Construction activity subject to this Construction General Permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation.

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The General Permit describes the elements that must be contained in a SWPPP as including (1) a site map(s) showing the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project; (2) a list of best management practices (BMPs) that will be used to protect storm water runoff and the placement of those BMPs; (3) a visual monitoring program, a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and (4) a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

If construction site compliance is not covered under a 401 water quality certification, an NPDES 402 permit is required. Based on requirements associated with the Construction

General Permit and discussions with the Central Valley RWQCB (Raley, pers. comm., 2010; Muhl, pers. comm., 2009), if grading for a routine maintenance or restoration project was over 1 acre, filing a Notice of Intent (NOI) under the construction general permit would be required. To streamline the Construction General Permit authorization process for LFR CMP routine maintenance and restoration projects, RWQCB staff suggested that they would consider approval of a “generic” SWPPP for the LFR CMP. Under this strategy, DWR would develop a generic SWPPP with standardized BMPs for all routine maintenance and restoration projects. A draft version of the SWPPP would be submitted to the RWQCB for comment. Once the RWQCB determined the generic document met the SWPPP requirements, the generic SWPPP could be submitted on a project-by project basis with a project-specific NOI and check for the required NPDES permit filing fee. The RWQCB indicated they generally would be able to turn around a Notice of Applicability to use the General Construction Permit in such cases in approximately 10 days from receipt of the NOI.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), waters of the state fall under the jurisdiction of the SWRCB and RWQCBs. The Porter-Cologne broadly defines “waters of the state” as well as the term "discharge of waste." Waters of the state include any surface water or groundwater, including saline waters, within the boundaries of the state. Discharges of waste include fill, any material resulting from human activity, or any other "discharge" that may directly or indirectly impact waters of the state. This jurisdiction includes waters (including wetlands and isolated wetlands) that the USACE deems to be isolated or non-jurisdictional. For waters of the state not subject to section 404, the SWRCB and RWQCB would authorize impacts by issuing a waste discharge requirement (WDR) or, in some cases, a waiver of WDR, with or without special conditions. The RWQCB also may issue a WDR in addition to a water quality certification, under section 401.

Porter-Cologne allows SWRCB to adopt statewide water quality control plans or basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control non-point and point sources of pollution to achieve and maintain these standards. RWQCBs must prepare and periodically update water quality control basin plans. Basin plans are the RWQCB's master water quality control planning document.

The LFR CMP would include a description of how the activities proposed under the plan would be consistent with the September 2009 *Water Quality Control Plan for the Sacramento and San Joaquin River Basins* (Basin Plan), including, but not limited to, how water quality standards and beneficial uses would be achieved or improved by the implementation of any activity covered under the LFR CMP and by the LFR CMP in its entirety.

CALIFORNIA DEPARTMENT OF FISH AND GAME

LAKE AND STREAMBED ALTERATION PROGRAM

California Fish and Game Code section 1600 requires notification to DFG before conducting activities that will substantially obstruct or divert natural flow of state waters; substantially change or use materials from a bed, bank, or channel; or deposit materials into a river, stream, or lake. Potential mechanisms for authorizing the proposed LFR CMP maintenance and restoration activities under section 1600 include development of a Master SAA, a Long-Term SAA, or an MOU or Memorandum of Agreement (MOA) between DFG and DWR.

DFG's past and current approaches to authorization for DWR maintenance efforts in the lower Feather River include a 2003 MOU for maintenance of flood control projects in the Sacramento River and Feather River Wildlife Areas (DFG and DWR 2003 [this MOU covers additional waterways outside the lower Feather River]) and an SAA for routine maintenance of flood control projects by the DWR Sacramento and Sutter Maintenance Yards (DWR Routine Maintenance Streambed Alteration Agreement [RMSAA]), which became effective on January 6, 2011 (DFG 2011). The 2011 DWR RMSAA is a type of MOA and outlines a project-specific approval process whereby DWR provides detailed notification to DFG before conducting routine maintenance. This allows DFG to review DWR's proposed maintenance work to ensure that the work fits within the parameters and covered activities of the RMSAA and confirm that the work does not adversely affect fish and wildlife resources. Additionally, an annual report is submitted to DFG, summarizing the work completed that year.

Based on discussion with DFG staff (Barker, pers. comm., 2011), use of the existing RMSAA would require an amendment to (1) incorporate any LFR CMP activities outside the existing RMSAA coverage area, (2) to incorporate any new maintenance or restoration activities not covered under the existing SAA, (3) to incorporate provisions pertaining to CEQA compliance (the existing SAA is for CEQA-exempt projects) and (4) to incorporate local maintaining agencies and other non-DWR users. DFG staff explained that only minor changes to the existing RMSAA could be accommodated by an amendment, and that adding Local Maintaining Agencies (LMAs) and restoration contractors would not be considered a minor change. An MOU or MOA could be developed for the LFR CMP and used to increase the efficiency of the process for compliance with section 1600 using the current RMSAA as a reference.

The benefit of an MOU or MOA approach as compared to other types of SAAs is that this approach could allow for use by local maintaining agencies and other LFR CMP partners who would "apply" to DWR for authorization to conduct LFR CMP work under the MOU or MOA. DWR would perform an initial screening of the notifications to ensure that they fit within the covered activities, conditions, and certified CEQA document of the MOU or MOA before forwarding the notifications to DFG for approval and issuance of an individual SAA on a much shorter timeline than if the LMA or other LFR CMP partners notified DFG directly. DFG staff pointed out that this also would allow LMAs and other LFR CMP partners to utilize DWR biologists to perform any required preconstruction surveys, as the LMAs often do not have staff biologists or funding to hire biological consultants.

Another vehicle for flood management activities to comply with section 1600 would be a Master SAA. Under this type of agreement, DFG would maintain authority over the SAA process and be notified before beginning a new project under the agreement. A Master SAA allows DFG to assess the potential impacts of a project on a case-by-case basis and determine the specific avoidance and minimization measures for the species that may be present in the location of the project. In addition, conditions may change on an annual basis, such as occupation by nesting raptors that were previously absent from a project area. It also allows DFG to regularly ensure that conditions of the Master SAA are being implemented.

The timeline for executing a Master LSAA, a Long-Term LSAA, an MOU, or an MOA between DFG and DWR is difficult to anticipate, but can be roughly estimated to take approximately 12 months to 18 months, depending on DFG and DWR workloads. DFG staff have indicated that this timeline could be much shorter if the CEQA document clearly defines the scope of work and DFG and DWR continued to work together through the LFR CMP Work Group.

Executing a California Fish and Game Code section 1600 authorization mechanism would require certification of CEQA compliance; DFG would be a responsible agency for CEQA compliance. In acting on issuing a section 1600 authorization, DFG would rely on the CEQA document to prepare and issue its own findings regarding the project, and to decide whether or not to grant section 1600 authorization.

LSAA's have a standard, 5-year expiration, with an option to renew once for an additional 5 years. Long-term LSAA's can be issued for periods longer than 5 years. An MOU or MOA can be made effective until terminated in writing by either signatory party. The individual (project-specific) agreements issued through the MOU or MOA are likely to have the standard 5-year expiration with an option to renew once for an additional 5 years.

CALIFORNIA ENDANGERED SPECIES ACT

The CESA prohibits activities that will result in "take" of state-listed and candidate species without prior DFG authorization through an Incidental Take Permit. California Fish and Game Code section 86 defines take as the act or attempt to "hunt, pursue, catch, capture, or kill." DFG may authorize take of state-listed and candidate species though the issuance of an Incidental Take Permit (ITP), pursuant to Fish and Game Code sections 2081(b) and 2081(c) and California Code of Regulations (CCR) 14(6)(1).

Under the 2011 RMSAA, no provisions exist for take of state-listed species. (The 2011 RMSAA basically renewed the provisions of the 2006 Routine Maintenance Agreement.) The 2011 RMSAA incorporates timing restrictions intended to avoid adverse impacts to fully protected species or listed under CESA. The 2011 RMSAA also stipulates that DFG may impose additional measures on the maintenance work covered under the 2011 LSAA, if DFG determines such conditions are necessary to protect a fully protected or listed species from harm. Thus, DFG has ensured through provisions in the 2011 RMSAA that, with implementation of recommended conservation measures such as appropriate project timing and other avoidance measures, take (as defined under CESA) of state-listed species would be avoided. On this premise, if a similar type of programmatic SAA was developed for the LFR CMP, an MND or PEIR prepared pursuant to CEQA could address potential impacts to all state-listed species with potential for occurrence within the project area, and would include avoidance and other conservation measures to avoid and/or minimize project-related effects on state-listed and candidate species, thus avoiding the need for a take permit from DFG. During project implementation, if DFG determined that a particular maintenance or restoration activity could result in take under the state definition, that project would no longer qualify for authorization under the programmatic LSAA. In such cases, DFG would be consulted on an individual project basis and a California Fish and Game Code section 2081 Incidental Take Permit for the individual maintenance or restoration activity would be pursued. However, this approach would not align with the goals and objectives of the corridor approach, and CEQA analysis would be required for each project seeking to obtain a 2081 ITP. DFG staff highly recommended that if an HCP is considered for the LFR CMP, an NCCP is simultaneously pursued for CESA compliance to ensure coverage for all future projects by signatories to the plan (DWR, LMAs, etc.)

CESA compliance may be obtained through the use of Consistency Determinations, ITPs, or NCCPs. California Fish and Game Code section 2080.1 states the requirements and procedures for a 2080.1 Consistency Determination. A Consistency Determination may be obtained from DFG when a BO has been issued by USFWS and/or NMFS pursuant to an ESA section 7 consultation (incidental take statement) or ESA section 10(a) incidental take permit.

DFG must determine that the conditions specified in the federal incidental take statement or permit is consistent with CESA for species that are listed under both ESA and CESA. If it is determined that the federal incidental take statement or permit is not sufficient for compliance with the CESA, then a state ITP may be required, under section 2081(b).

CESA coverage also may be obtained through an NCCP, which is a regional programmatic approach to CESA compliance, provided that both the species and the activity are covered by the NCCP (see Natural Community Conservation Planning, below).

A 2081(b) permit is preferable to a 2080.1 Consistency Determination because a BO issued by USFWS and/or NMFS does not allow DFG to add conditions to the federal incidental take statement/permit and BO. Furthermore, the 2080.1 take prohibition only can be used for species that are listed under the federal ESA and CESA, and cannot be extended to species that are listed by the state but are not afforded protection under the federal ESA. DFG staff have indicated that a consistency determination is not a likely route for CESA compliance for the LFR CMP, as state-listed species are present that are not dually listed as federally threatened or endangered.

A 2081(b) permit authorizes take that is incidental to an otherwise lawful activity as long as the impacts of the authorized take are minimized and fully mitigated. Measures to minimize and fully mitigate these impacts must: (1) be roughly proportional in extent to the impact of the taking on the species; (2) maintain the applicant's objectives to the greatest extent possible; (3) be capable of successful implementation; and (4) have adequate funding implement and monitor compliance.

DFG has 30 days to determine whether a 2081 permit application is complete. DFG then has another 90–120 days (depending on whether DFG is a responsible or lead agency under CEQA) to complete a substantive review of the permit application; these time frames are extendable to 150–180 days, respectively, with written notice. However, these time frames are discretionary. If DFG does not act within this time frame, CESA's take prohibition is not suspended and proposed permits do not become effective by operation of law.

NATURAL COMMUNITY CONSERVATION PLANNING

DFG administrates the NCCP program, pursuant to sections 2800–2835, with the primary objective of conserving natural communities at the ecosystem level while accommodating compatible land use. DFG may issue an ITP authorizing the take of species covered in an NCCP, pursuant to section 2835 of the NCCP Act of 2003. An NCCP may provide a mechanism for programmatic CESA coverage.

DFG works with local governments and other applicants to develop NCCPs jointly with USFWS HCPs (see above) to provide one planning process and document. In some cases, local government decides not to pursue the higher conservation standard of NCCPs and works with DFG to provide a state regional incidental take permit to accompany the federal HCP. Thus, not all HCPs comply with NCCP standards. The NCCP development and permit processing phases do not have statutory time frames but can be roughly estimated as taking 1 to 5 years to complete in the Sacramento region. NCCPs vary in duration, from approximately 35 to 50 years.

SAFE HARBOR AGREEMENTS

DFG operates a SHA program pursuant to the requirements of the California State Safe Harbor Agreement Program Act (section 2089.2 of the California Fish and Game Code). The program is similar to the federal SHA program and encourages landowners to enhance habitat for threatened and endangered wildlife while providing incidental take coverage. A SHA may provide a mechanism for CESA coverage for the LFR CMP. Because DFG has issued few SHAs, it is difficult to provide a timeline for approval. The state SHA program has the same limitations for use by DWR as described above for federal SHAs. Only the landowner, not an easement holder, can initiate an SHA.

PROS AND CONS OF CESA COMPLIANCE MECHANISMS FOR THE LFR CMP

Table 2 summarizes the pros and cons of the potential mechanisms for CESA compliance for the LFR CMP. It is important to note that the table does not provide an exhaustive list of all pros and cons associated with each of the potential compliance mechanisms presented. The pros and cons provided in the table are intended simply for purposes of comparison of the CESA compliance mechanisms presented. Additionally, the pros and cons listed in the table are specific to the LFR CMP and do not necessarily extrapolate to other programs or projects.

Table 2
Pros and Cons of Potential CESA Compliance Mechanisms[1]

Potential CESA Compliance Mechanisms	Pros	Cons	Timeframe2
2081 Incidental Take Permit	Requires less effort and time than NCCP development Can be amended without amending a biological opinion (BO)	No coverage for fully protected species Does not provide means of coverage for multiple applicants. Requires CEQA compliance (listed as a con because of a potentially longer time frame and additional cost)	30 days for adequacy determination, and 90–120 days to complete consultation, although often takes longer as permit requires review by both DFG region and headquarters Estimate: 6-8 months
2081 Consistency Determination	Lower level of effort for applicant compared to 2081 ITP or NCCP processes Does not require CEQA compliance	Requires ESA BO or Habitat Conservation Plan (HCP) Only provides CESA coverage for dually listed species BO mitigation requirements are often not appropriately defined for CESA purposes DFG cannot add conditions to the federal consultation In BOs, plants are only included if the action jeopardizes them, which is inconsistent with CESA Incidental take must be fully mitigated, which can be a higher “bar” than under ESA	30 days after issuance of BO/HCP

Table 2
Pros and Cons of Potential CESA Compliance Mechanisms[1]

Potential CESA Compliance Mechanisms	Pros	Cons	Timeframe2
		No coverage for fully protected species Does not provide means of coverage for multiple users Mitigation for jointly-listed species cannot proceed thru (most) mitigation banks for the time being due to recent policy decisions by DFG	
Natural Community Conservation Plan	Provides coverage for fully protected species May provide coverage for non-listed species Duration of coverage is usually longer than with ITP/Consistency Determination More opportunities to meet CESA "fully mitigated" standard because NCCPs are generally longer-term and larger in geographic scale than with ITP/Consistency Determination May provide means of take coverage for multiple users	Not well suited for linear projects No statutory timeline Large landscape planning effort is required More public involvement required than with 2081 ITP/Consistency Determination Requires assured funding (listed as a con because, in some cases, DWR has not been able to provide assured funding for their compensation projects) Requires CEQA compliance	Estimate: 1–5 years

This table does not provide an exhaustive list of all pros and cons associated with each of the potential compliance mechanisms presented. The pros and cons provided in the table are intended simply for purposes of comparison of the CESA compliance mechanisms presented.

[1] The pros and cons listed in this table are specific to the LFR CMP.

[2] The time frame estimates included in this table are rough timelines provided simply for purposes of comparison. Time frames can vary substantially based on agency workloads and staffing abilities, as well as DWR's ability to prepare and coordinate review of required supporting documents.

Source: Data compiled by AECOM in 2012

INTEGRATING ESA/CESA COMPLIANCE

At a Permitting Subcommittee meeting on November 15, 2011, DFG, USFWS and NMFS representatives discussed options for achieving and integrating ESA/CESA compliance for the LFR CMP. The discussion was based on the current permitting project description (presented above), which will require additional detail to enable identification of the best path forward. The determination of whether or not a federal nexus exists to allow for partial or full ESA compliance through a section 7 consultation will set the stage for selection of the most appropriate CESA compliance mechanism (i.e., NCCP or 2081 ITP). The ESA compliance

mechanism (i.e., section 7 consultation or HCP) does not dictate which CESA compliance mechanism must be used; however, there are advantages and disadvantages associated with the various combinations of ESA/CESA permitting approaches. There are several potential programmatic ESA/CESA permitting approaches for the LFR CMP including, but not limited to, a programmatic section 7 consultation/2081 ITP, an HCP/2081 ITP, and an HCP/NCCP. Potential advantages and disadvantages of these and other approaches, along with case studies providing examples of ESA/CESA permitting approaches for projects similar to the LFR CMP, are outlined in the draft *Central Valley Flood Protection Plan/Central Valley Flood System Conservation Strategy ESA-CESA White Paper Draft* prepared by H.T. Harvey & Associates (2012) (Appendix B). The selection of case studies presented in the white paper was based on the following criteria: 1) participants included multiple jurisdictions at the federal, State, and local level as well as private landowners; 2) covered lands were large (i.e., 200,000+ acres to a million+ acres); 3) covered activities included O&M and/or development of water facilities; 4) covered lands were "linear" and included instream and riparian areas; and 5) included permitting for both ESA and CESA. The proposed LFR CMP maintenance and restoration projects share these basic criteria.

The identification of the approach most suitable for the LFR CMP will be determined through ongoing coordination with the LFR CMP Permitting Subcommittee following submittal of a detailed project description to the permitting agencies. The key considerations in determining the appropriate ESA/CESA permitting approach will include the following:

- identification of which LFR CMP maintenance and restoration activities will result in take;
- identification of which of these activities have a federal nexus;
- identification of species that will require ESA/CESA incidental take coverage;
- identification of the parties (applicants) who will need take coverage;
- evaluation of the mitigation requirements associated with the take coverage being sought, including potential funding assurance requirements;
- evaluation of the practicability of complying with long-term monitoring requirements associated with HCP/NCCP's; and
- evaluation of the level of regulatory assurances desired and how this balances with the need to minimize the time and costs required to obtain ESA/CESA coverage.

CENTRAL VALLEY FLOOD PROTECTION BOARD

The CVFPB has authority to enforce standards for the construction, maintenance, and protection of adopted flood control plans that will best protect the public from floods. These standards apply to the erection, maintenance, and operation of levees, channels, and other flood control works within its jurisdiction, including but not limited to standards for encroachments, construction, vegetation, and erosion control measures. CVFPB jurisdiction includes public and private lands protected by federal flood control works in the Sacramento and San Joaquin Drainage District.

A Board permit is required before starting work within the CVFPB's jurisdiction for the following:

- The placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment or works of any kind, and including the planting, excavation, or removal of vegetation, and any repair or maintenance that involves cutting into the levee, wholly or in part within any area for which there is an adopted plan of flood control, must be approved by the board prior to commencement of work (CCR section 6).

Furthermore, restoration activities such as the installation of plants would be subject to, but not limited to, the following:

- Any vegetation which interferes with the successful execution, functioning, maintenance or operation of the adopted plan of flood control, must be removed. If the owner does not remove such vegetation upon request, Board reserves the right to have the vegetation removed at the owner's expense (CCR section 131 [d]).

Vegetation and vegetation maintenance standards for floodways and bypasses include but are not limited to the following:

- Invasive or difficult-to-control vegetation, whether naturally occurring or planted, that impedes or misdirects floodflows is not permitted to remain on a berm or within the floodway or bypass

- The board may require clearing and/or pruning of trees and shrubs planted within floodways in order to minimize obstruction of floodflows

- Trees and brush that have been cut down must be burned or removed from the floodway prior to the flood season (CCR section 131[g])

The state strategy to manage levee vegetation consistent with these and other CVFPB regulations is a component of the Central Valley Flood Protection Plan.

As part of the permit application, the CVFPB requires documentation demonstrating that any downstream impacts (e.g., rise in water surface elevation) have been eliminated, and that no water rights are severed as a result of project construction. The CVFPB has considered encroachment permit applications for projects in the context of a program. The permit application and Title 23 CCR can be found on the Central Valley Flood Protection Board's Web site (http://www.cvfpb.ca.gov/).

CALIFORNIA STATE LANDS COMMISSION

The SLC has jurisdiction and management control over certain public lands of the state that were received by the state from the United States. When California became a state in 1850, it acquired approximately 4 million acres of land underlying the state's navigable and tidal waterways. Known as sovereign lands, these lands include the beds of California's navigable rivers, lakes, and streams, as well as the state's tide and submerged lands along the state's more than 1,100 miles of coastline and offshore islands, from the mean high-tide line to 3 nautical miles offshore.

The issuance by the SLC of any lease, permit, or other entitlement for use of state lands is reviewed for compliance with the provisions of CEQA. Additionally, if the application involves lands found to contain "Significant Environmental Values" within the meaning of Public

Resources Code section 6370 et seq., consistency of the proposed use with the identified values also must be determined through the CEQA review process. Pursuant to its regulations, the SLC may not issue a lease for use of “Significant Lands” if such proposed use is detrimental to the identified values.

The limit of SLC jurisdiction on the Feather River would be the low water mark in the bed of the historic river, where it was located in 1850. The SLC would need to review the project area to determine the boundaries of lands subject to SLC lease requirements within the LFR CMP project area. Based on conversations with a SLC staff (Hays, pers. comm., 2010), mechanisms available to streamline SLC lease requirements for the LFR CMP include development of a maintenance MOU or development of a long-term lease or master lease. SLC staff indicated there is an existing master lease with DWR for levee maintenance and suggested that the existing lease may be expandable to include the proposed routine maintenance and restoration activities. The lease application process generally takes 3–6 months, and an approved CEQA document is required before lease issuance.

MITIGATION

The majority of the impacts associated with the proposed maintenance activities included in the project description above would be temporary in nature. The only possible exception would be bank protection and levee erosion repair. However, it is conceivable that with the application of bioengineered bank stabilization methods (similar to those developed for DWR’s Small Erosion Repair Program), “self-mitigation” potentially could be achieved for those projects.

Compensatory mitigation requirements typically are designed to offset impacts from one-time permanent land use changes. Some proposed LFR CMP activities, such as flood channel maintenance, would occur repeatedly in the same location to manage vegetation that re-establishes relatively quickly after disturbance. In these situations, habitat functions may be naturally restored as vegetation regenerates. Regulatory agencies sometimes require additional mitigation every time maintenance recurs and vegetation is disturbed, without granting credit for the habitat functions associated with vegetation that re-establishes naturally, following disturbance.

DWR has emphasized a desire for development of a compensatory mitigation strategy for the LFR CMP that would avoid the need for project-by-project accounting of mitigation debits and credits. Under DWR’s proposed approach, baseline (pre-project) biological functions would be assessed and recorded, and commitments to maintain biological functions at an established threshold above baseline functions would be agreed on and documented through a legal instrument, such as a mitigation banking instrument or interagency MOA.

The USACE nationwide permit program includes provisions for establishing flood management facility maintenance baselines for purposes of nationwide permit authorization. Under these provisions, the USACE will approve the maintenance baseline based on the approved or constructed capacity of the flood control facility; if no evidence of the constructed capacity exists, an approved capacity is used. The USACE will determine any required mitigation one-time only for impacts associated with maintenance work at the same time that the maintenance baseline is approved. Such mitigation is only required once for any specific reach of a flood control project. Once the one-time mitigation has been completed or a determination has been made that mitigation is not required, no further mitigation is required for maintenance activities within the maintenance baseline. In determining appropriate mitigation, the USACE

gives special consideration to natural watercourses that have been included in the maintenance baseline and require compensatory mitigation and/or best management practices as appropriate. It is expected that a similar one-time mitigation approach could be applied by USACE under an RGP for the LFR CMP, based on an established maintenance baseline.

USFWS has developed a "Safe Harbor" concept for providing mitigation for listed species habitat, where baseline habitat functions are measured and habitat is enhanced through a "habitat-friendly" maintenance regime, thereby creating increased functions. The land manager is given "take" authority to return to baseline conditions at the end of the agreement period. This gives the landowner ability to manage the habitat as long as values remain above the baseline condition. When habitat values remain above baseline, no additional mitigation is required.

For areas within the LFR CMP boundaries where repeated flood system maintenance would be needed, DWR is proposing a mitigation strategy that adopts some of the Safe Harbor concepts:

- Define baseline habitat conditions;
- Increase habitat functions substantially above baseline while securing programmatic agreements with regulatory agencies to allow impacts within a portion of the area where habitat functions were increased above baseline;
- Disturbance would never affect enough habitat to return habitat conditions to baseline conditions.

Development of agreements that utilize these concepts would avoid the need for, the cost of, and delays from project-by-project mitigation for repeat disturbance in established maintenance areas.

As an example of this approach, reference is made to the BO issued by USFWS on September 9, 2005, entitled, "Intra-Agency Formal Consultation on the Memorandum of Understanding between the U.S. Fish and Wildlife Service, California Department of Fish and Game, and California Department of Parks and Recreation for Riparian Restoration and Management in Glenn, Tehama, Butte, and Colusa Counties, California" (USFWS 2005, hereinafter referred to as the O'Connor Lakes BO). The O'Connor Lakes BO evaluated the comparative potential long-term beneficial effects on valley elderberry longhorn beetle (VELB) associated with proposed restoration activities at the O'Connor Lakes Unit against the potential temporary impacts from proposed DWR flood maintenance activities. The BO presented conservation measures to be implemented by DWR during the proposed maintenance activities. Based on implementation of those measures, the USFWS determined that the "overall effect of this project will result in long-term beneficial effects to the VELB. The project will restore 228 acres of habitat for the imperiled animal. This addition of habitat in the area will benefit the listed beetle by increasing population numbers and improving the dispersal abilities of the species. The proposed project may result in short-term adverse effects to the VELB." USFWS also recognized that the project would "result in the establishment of a significant amount of habitat for the valley elderberry longhorn beetle that will be of long-term benefit to this listed animal, and any adverse effects will be temporary and relatively minor in nature." This approach compares the relative *temporal* effects of proposed restoration and maintenance activities *as well as* the magnitude of those effects, and measures the overall effects against an established pre-project environmental baseline. DWR

has requested exploration of a similar approach to developing an advance compensatory mitigation strategy for the LFR CMP.

FINAL PERMITTING STRATEGY FOR LFR CMP MAINTENANCE AND RESTORATION ACTIVITIES

A final permitting strategy is being developed through ongoing coordination with the permitting agencies. Once finalized, the strategy will be presented in flowchart form as an appendix to the LFR CMP document.

The flowchart will outline the interagency authorization processes and coordination sequences to achieve the various programmatic authorizations.

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APPENDIX A

ACRONYMS

ACRONYMS

BGEPA	Bald and Golden Eagle Protection Act
BMP	best management practice
BO	Biological Opinion
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CVFPB	Central Valley Flood Protection Board
CWA	Clean Water Act
DFG	California Department of Fish and Game
DWR	California Department of Water Resources
EPA	U.S. Environmental Protection Agency
ESA	federal Endangered Species Act
FWCA	Fish and Wildlife Coordination Act
HCP	Habitat Conservation Plan
ITP	Incidental Take Permit
LFR CMP	Lower Feather River Corridor Management Plan
LMA	Local Maintaining Agency
MBTA	Migratory Bird Treaty Act
MMPA	Marine Mammal Protection Act
MND	Mitigated Negative Declaration
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OHWM	ordinary high water mark
O&M	operations and maintenance
PA	Programmatic Agreement
RD	Reclamation District

PEIR	Programmatic Environmental Impact Report
PGP	Programmatic General Permit
Porter-Cologne	Porter-Cologne Water Quality Control Act
RGP	Regional General Permit
RHA	Rivers and Harbors Act
RMSAA	Routine Maintenance Streambed Alteration Agreement
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
Services	USFWS and NMFS
SHA	Safe Harbor Agreement
SHPO	State Historic Preservation Office
SLC	California State Lands Commission
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VELB	valley elderberry longhorn beetle
WDR	waste discharge requirement

APPENDIX B

ESA WHITE PAPER

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CENTRAL VALLEY FLOOD PROTECTION PLAN/CENTRAL VALLEY FLOOD SYSTEM CONSERVATION STRATEGY (CVFPP/CVFSCS)

ESA-CESA STRATEGY WHITE PAPER DRAFT

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CENTRAL VALLEY FLOOD PROTECTION PLAN/CENTRAL VALLEY FLOOD SYSTEM CONSERVATION STRATEGY (CVFPP/CVFSCS)

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INTRODUCTION

Flood management in the Central Valley encompasses a wide range of actions and projects of various sizes, ranging from routine levee maintenance to large-scale bypass projects. Historically, and currently, projects are designed, permitted and implemented on a project-by-project basis; recently, a more comprehensive approach has been outlined by the California Department of Water Resources (DWR) as part of the Central Valley Flood Protection Plan (CVFPP).

The CVFPP builds on the State's ongoing flood management work; it also proposes a wide range of actions and projects that could occur over an extensive geographic area and in multiple county and city jurisdictions (see Sections 1.3 and 1.5). Also included in the CVFPP is a Conservation Framework, which will eventually be replaced with the Conservation Strategy in 2017. The Conservation Strategy will support the CVFPP by integrating measures to avoid, minimize, and mitigate potential impacts to environmental resources and incorporate environmental stewardship. The implementation timeline for major projects is contingent upon multiple considerations, but particularly upon securing adequate funding sources. These issues will be considered in determining an efficient permitting approach for the CVFPP. Complying with the Federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA) will be critical to successful permitting of projects.

The objective of this white paper is to provide the necessary background information and analyses for DWR to make informed decisions on an ESA/CESA permitting strategy through the CVFPP process. This white paper describes how the ESA/CESA permitting approach is critical to and necessary for obtaining several additional permits. It also presents information on the types of ESA/CESA permitting approaches available, and analyzes pros and cons of permitting pathways as the CVFSCS develops; these pros and cons can ultimately affect the ESA/CESA approach.

In addition, case studies of large multispecies Habitat Conservation Plans (HCP) and descriptions of issues specific to CVFPP and ESA/CESA that warrant additional consideration are provided. These case studies will further inform the decision-making process.

1 INFORMATION RELEVANT TO OBTAINING AN ESA/CESA PERMIT

Actions that require ESA/CESA permits are those that could result in "take" of federally and State listed threatened and endangered species. Without an incidental take permit, it is illegal to conduct activities that result in take of listed species, so projects that may result in take could be subject to prosecution and are vulnerable to 3rd party lawsuit. However, incidental take permits can be issued for take that results from, but is not the purpose of, carrying out an otherwise lawful activity.

There are some fundamental differences between ESA and CESA that affect permitting; these differences are summarized in Table 1. The definition of incidental take differs slightly between ESA and CESA: for the ESA, take includes harm and harassment, whereas for CESA the definition of take is less stringent and does not include harm and harassment. Another difference between the ESA and CESA is that critical habitat may be designated for federally listed species but not for State listed species, and actions that affect critical habitat must also be considered during permitting. ESA/CESA permitting requires that the applicant define the activities, species, and geographic area to be covered, and the timeline for the activities and their mitigations (that affect the duration of the permit). In addition, the ESA/CESA permitting approach may also need to address funding assurances, monitoring and adaptive management, biological goals and objectives, changed and unforeseen circumstances, and public participation. These issues are described and discussed in Section 4.2.

Table 1. Differences between CESA and ESA that may affect permitting.

	CESA	ESA
Definition of take	Hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill a State listed threatened or endangered species	Harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct of a Federally threatened or endangered species. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering.
Critical habitat	Not designated for State-listed species	May be designated for threatened and endangered species, these are designated areas that have the physical or biological features essential to the conservation of the species and may require special management considerations or protection. Federal agencies are required to consult with the USFWS and/or NMFS on actions they carry out, fund, or authorize to ensure that their actions will not destroy or adversely modify critical habitat.
Key: USFWS = United States Fish and Wildlife Service NMFS = National Marine Fisheries Service		

For federally listed species, permitting mechanisms include ESA Section 7 consultation for actions with a Federal nexus and Section 10 HCP for actions without a Federal nexus. In addition, there are voluntary agreements with private landowners, such as Safe Harbor Agreement (SHA), and Candidate Conservation Agreement (CCA). For State listed species, permitting mechanisms include 2081 Incidental Take Permit (ITP), 2080.1 Consistency Determination, and Natural Community Conservation Planning (NCCP), any of which could be used by Federal, State, or private (i.e., non-Federal and non-State) entities. California also has a classification of "fully protected species" and the only way that incidental take can be permitted for those species is through a NCCP (this is new CESA legislation, Section 2835 of the Fish and Game Code). These permitting mechanisms are described further in Section 1.1 and 1.2.

1.1 ESA Permitting Mechanisms

The following are permitting mechanisms used to obtain incidental take permits for federally listed species. These descriptions are from the Endangered Species Consultation Handbook

(USFWS and NMFS, 1998) and the Habitat Conservation Planning Incidental Take Permit Processing Handbook (USFWS and NMFS, 1996). More detail on these permitting mechanisms can be found in the CVFPP's Attachment 9G: Regional Permitting Options (DWR 2011).

If federally listed species are present, if there is habitat for listed species, or if critical habitat is designated in the project area, then activities that could result in "take" or destruction or adverse modification of designated critical habitat may require either a Section 7 consultation or Section 10 HCP.

Section 7 Consultation - For a proposed action with a "Federal nexus" (a Federal agency is undertaking, funding, permitting, or authorizing actions that could affect a federally listed species), the lead Federal agency would consult with USFWS and/or NMFS[1] (hereafter, "the Service") on the potential effects. During this process, the Service may provide technical assistance to project proponents to clarify the potential effects on federally listed species or critical habitat and make recommendations to the project to reduce or avoid adverse effects. The Service can concur, in writing, that the proposed action will have "no effect" or "is not likely to adversely affect" federally listed species or critical habitat. In this case, no incidental take statement would be issued because it has been determined that take is unlikely to occur. If the Service or the lead Federal agency determines that the project may adversely affect federally listed species or critical habitat, formal consultation will be initiated to ensure that the actions are not likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Minimization measures are required as a part of the project action to reduce take, but mitigation measures are not required. It generally concludes with the issuance of a biological opinion and an incidental take statement by the Service.

Section 10 HCP – For proposed actions conducted by a non-Federal entity (i.e., actions with no "Federal nexus"), an HCP must accompany an application for an incidental take permit ("HCP permit application") for impacts on federally threatened or endangered species or designated critical habitat. An HCP must minimize and mitigate effects on listed species to the maximum extent practicable. The five-point policy, which is an addendum to the Habitat Conservation Planning Incidental Take Permit Processing Handbook, contains guidance for items to be included in an HCP, in the areas of biological goals and objectives, adaptive management, monitoring, permit duration, and public participation (65 FR 35242). The biological goals and objectives guide the HCPs operating conservation program and should also support the recovery goals of listed species covered by the HCP. Adequate funding must be provided to implement the minimization and mitigation measures and to monitor compliance with and the effectiveness of the measures. HCPs have a "no surprises" policy that provides regulatory assurances that no additional land use restrictions or financial compensation will be required of the permit holder with respect to covered species, even if unforeseen circumstances arise indicating that additional mitigation is needed. To process an HCP permit application, the Service issues an incidental take permit and writes a biological opinion under section 7 of the ESA confirming that the incidental take does not jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat.

[1] NMFS and USFWS, share responsibility for regulating federally listed species and implementing the ESA. Generally, USFWS manages land and freshwater species, while NMFS manages marine and anadromous species such as salmonids and green sturgeon.

Section 10 Safe Harbor Agreement (SHA) – A SHA is a voluntary agreement between private or other non-Federal property owners and the USFWS (SHA are only available through USFWS; NMFS does not do SHA for their listed species). In exchange for actions that contribute to the recovery of federally listed species on privately-owned lands by improving baseline conditions, the participating property owners receive formal assurances from the USFWS that if they fulfill the conditions of the SHA, the USFWS will not require any additional or different management activities by the participants without their consent. In addition, the USFWS will authorize a Section 10 incidental take permit. Take associated with a SHA can be ongoing take that results from the conservation measures that are implemented, the property owner's other activities, or a return to the baseline condition that occurs after conservation benefits have accrued for a period of time. This permit would allow participants to take individual listed plants or animals or modify habitat to return population levels and habitat conditions to those agreed upon as baseline at the end of the agreement period.

Candidate Conservation Agreement (CCA) - A CCA is a voluntary conservation agreement between the Service and one or more public or private parties to benefit candidate species for Federal listing. The Service works with its partners to identify threats to candidate species, plan the measures needed to address the threats and conserve these species, identify willing landowners, develop agreements, and design and implement conservation measures and monitor their effectiveness. The goal of these actions is to reduce or remove the need for listing candidate species as threatened or endangered. No incidental take permit is issued for a CCA. Activities covered in CCAs may be similar to otherwise lawful activities that would be covered in HCPs, or they could be activities that produce temporary conservation benefits similar to SHAs.

Other Statutes – Other Federal statutes that the Service has responsibility for include the Magnusen-Stevens Fisheries Conservation and Management Act for the protection of Essential Fish Habitat administered by NMFS, and the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act administered by USFWS. Compliance with the National Environmental Policy Act (NEPA) may also be required by the Service.

1.2 CESA Permitting Mechanisms

The following are permitting mechanisms that are used to obtain incidental take permits for California State listed species. These descriptions are from the California Department of Fish and Game (DFG) (DFG, 2011). More detail on these permit types can be found in Attachment 9G: Regional Permitting Options (DWR 2011).

If State-listed species are present or if there is habitat for listed species, then activities that could result in "take" may require an incidental take permit. DFG can authorize incidental take for a State-listed species through a 2081 Incidental Take Permit, 2080.1 Consistency Determination, Memorandum of Understanding, or in a Natural Communities Conservation Plan, HCP, habitat management plan, or other plan or agreement approved by or entered into by the DFG.

2081 Incidental Take Permit (ITP) - DFG can issue a 2081 ITP for a State-listed species. The impacts of the authorized take must be minimized and fully mitigated, and adequate funding must be provided to implement the minimization and mitigation measures and to monitor

compliance with and the effectiveness of the measures. The issuance of the ITP must not jeopardize the continued existence of a State-listed species. A 2081 ITP may not authorize take of "fully protected" species and "specified birds." If a project is planned in an area where a fully protected species or a specified bird occurs, the applicant must design the project to avoid all take. A take permit for take of fully protected species, however, may be issued via the Natural Community Conservation Planning process (see below).

2080.1 Consistency Determination - For species that are listed under both ESA and CESA, an applicant who has obtained a Federal incidental take permit via Section 7 consultation or HCP can submit the permit to DFG for a determination as to whether it is "consistent" with CESA. DFG can then issue a 2080.1 Consistency Determination if they determine that the conditions specified in the permit are consistent with CESA. If DFG determines that the Federal statement/permit is not consistent with CESA, the applicant must apply for a 2081 ITP.

Natural Community Conservation Plan (NCCP) - A DFG program that takes an ecosystem approach to planning for the protection and perpetuation of biological diversity. A NCCP identifies and provides for regional or area-wide protection of plants, animals, and their habitats, in perpetuity, while allowing compatible and appropriate economic activity. A NCCP must include independent scientific analysis and input to identify foundational principles for landscape and habitat conservation, species protection, and adaptive management. A NCCP can be used to obtain an incidental take permit for State-listed species, including those designated as “fully protected.” NCCPs provide regulatory assurances that no additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources will be required without the consent of plan participants, unless DFG determines that the plan is not being implemented consistent with the terms of the implementation agreement, even if unforeseen circumstances arise indicating that additional mitigation is needed.

Other Statutes – Compliance with the California Environmental Quality Act (CEQA) may also be required by the public lead agency that has the primary responsibility for approving the project.

1.3 CVFPP Project Activities

The major flood management programs are described in the CVFPP in more detail. The types of activities that would occur in each program would affect the type of ESA and CESA permitting.

- **Flood Emergency Response Program** – Includes making flood management system information available and assisting with preparing flood emergency response plans
- **Flood System Operations and Maintenance Program** – Includes periodic maintenance and repairs of flood management facilities, such as channel maintenance, erosion and levee repairs, levee maintenance, and repair or replacement of hydraulic structures
- **Floodplain Risk Management Program** – Includes delineation and evaluation of floodplains to assist with near-term and long-term land use planning efforts
- **Flood Risk Reductions Projects Program** – Has three major implementation programs:

- *System Improvements*: Land acquisition and easements, improvements to existing levees, constructing new levees, riparian restoration, fish passage improvements; upgrading flood control structures, removing sediment from weirs and gates, and coordinating reservoir operations during floods
- *Conservation Framework and Conservation Strategy*: Integrates ecosystem restoration and environmental stewardship to reduce and/or mitigate environmental impacts of CVFPP activities. The Conservation Framework will provide guidance until the Conservation Strategy is completed in 2017.
- *High Risk Area Flood Risk Reductions*: Flood damage reduction projects for urban areas with the goal of attaining a 200-year level of flood protection, such as structural repairs, reconstruction, or improvements to about 160 miles of urban SPFC levees. Actions would typically be implemented within current facility footprints because of the proximity of existing development and infrastructure.
- *Small Community Flood Risk Reductions*: Flood damage reduction projects for small communities with the goal of attaining a 100-year level of flood protection, such as new levees, levee improvement, and floodwalls.

- **Flood System Risk Assessment, Engineering, Feasibility, and Permitting** – Assessments and engineering support for planning site-specific and systemwide improvements
- **Additional Project Activities –**
  - *Levee Vegetation Management Strategy*: DWR will implement a comprehensive vegetation management strategy on the levees that meets public safety goals by providing for levee integrity, visibility, and accessibility for inspections, maintenance, and flood fight operations while also attempting to protect and enhance shaded riverine aquatic habitat in the CVFPP plan area.
  - *Regional Advance Mitigation Planning (RAMP)*: DWR is teaming with several agencies to create advance mitigation and conservation sites throughout the CVFPP plan area.
  - *Corridor Management Plans (CMP)*: Long-term (i.e., greater than 30 years) plans that will be created for managing flood protection facilities, conveyance channels, floodplains and associated uplands, maintenance, and restoration of river corridors. Will provide a foundation for securing programmatic regulatory agency approvals for O&M and habitat restoration and include coordination with stakeholders, State, Federal, and local agencies, nongovernmental organizations, maintenance districts, agricultural interests, and landowners. A CMP for the lower Feather River (between Yuba City and the Sutter Bypass) is currently in development.

1.3.1 ESA Permitting

The type of ESA permitting for CVFPP activities depends, first and foremost, on whether there is a Federal nexus for those activities. For actions with a Federal nexus that could affect federally listed species, a Section 7 consultation would be the appropriate permitting mechanism. The

proposed action that would be included in the permitting process would include project activities, as well as any conservation measures to reduce impacts on listed species that are proposed as a part of the action. For CVFPP activities, the Federal nexus is most likely to originate from one of three Federal agencies:

- **U.S. Army Corps of Engineers (USACE)** – For actions requiring a 1) Section 404 permit of the Clean Water Act for discharge of any dredge or fill materials into waters of the United States, including wetlands, or 2) Section 10 permit of the Rivers and Harbors Act for the construction of any structure in or over any navigable water of the U.S., or 3) 33 U.S.C. 408- Section 408 permit for alterations/modifications to existing Corps projects, including degradations, raisings, realignments, and placement of structures provided they do not adversely affect the functioning of the project and flood protection activities. In general, the USACE does not assume jurisdiction over actions that occur on the landside, crown, and upper third of the waterside of the levees, or above the ordinary high water mark (Cowin and McCamman, 2010).
- **Bureau of Reclamation (BOR)** – For actions associated with BOR water management activities or facilities in the plan area.
- **Federal Emergency Management Agency (FEMA)** – For any flood risk reduction actions funded by FEMA and administration of certain activities of the National Flood Insurance Program (NMFS, 2008a).

For actions without a Federal nexus that could affect federally listed species, a Section 10 HCP would likely be the appropriate permitting mechanism. A Section 10 SHA may be less useful for CVFPP activities because the incidental take permit issued through a SHA is only issued to the fee title/landowner, whereas CVFPP activities will be conducted on lands with many owners throughout the plan area (although some areas may be under DWR ownership). In addition, there are no SHA implementing regulations for NMFS, thus it is not currently possible to obtain a SHA for species managed by NMFS (62 FR 32189). A CCA would not result in issuance of an incidental take permit, thus would not be an appropriate permitting mechanism to pursue.

1.3.2 CESA Permitting

Although CESA permitting in conjunction with ESA permitting will likely be necessary, the CESA permitting mechanism appropriate for CVFPP project activities is not dependent upon the project activity, entity or agency carrying out the project. Thus, any non-Federal or Federal entity or agency is eligible to apply for any type of CESA permit, including a 2081 ITP, 2080.1 Consistency Determination, or NCCP. However, project activities that affect ecosystems may be better suited to a NCCP than a 2081 ITP or 2080.1 Consistency Determination, particularly where large-scale mitigation is planned that will help mitigate for impacts to State-listed species.

1.3.3 Considerations for Categorizing CVFPP Activities for ESA/CESA Permitting

Projects and actions implemented under the CVFPP should be categorized or grouped in a way that facilitates ESA/CESA permitting. Potential categories could include:

- **Small/ short term actions** – Includes smaller, discrete actions such as routine maintenance, non-routine maintenance, and levee repairs where each action is within the SPFC footprint. Potential approaches to permitting include: 1) avoiding incidental take altogether through the use of take avoidance measures, 2) use of a programmatic Section 7 consultation to cover all potential activities over the long-term, or 3) incorporating pay-as-you-go mitigation measures in order to satisfy ESA and CESA permitting requirements.
- **Large/ long term actions** – Includes actions such as system improvements, land acquisition, ecosystem restoration, construction, replacement, or improvements to bypasses, fish passage, or other major flood structures where each action has a relatively large footprint and ecosystem-scale impacts (positive or negative) that may occur beyond the SPFC footprint. Potential approaches to permitting include a regional Section 10 HCP or HCP/ NCCP, individual Section 7 consultations/ CESA permits (2081 ITP or 2080.1 Consistency Determination) for each project, and a regional programmatic Section 7 consultation/CESA permit (2081 ITP or 2080.1 Consistency Determination).
- **RAMP and Conservation Strategy** – Includes ecosystem restoration measures and acquisition of mitigation and conservation sites that could be used to minimize or mitigate for impacts resulting from CVFPP activities. These programs could be incorporated as mitigation for Section 10 HCP or HCP/NCCP, or CESA 2081 ITP.

1.4 Species that May Be Affected by the CVFPP

Activities that require ESA/CESA permits are those that result in take of federally and State listed threatened and endangered species. Species that should be covered by an ESA/CESA permit include those whose distribution and habitat overlaps the project area and could be subject to take by project activities. In addition, if there is designated critical habitat for a federally listed species in the project area, regardless of whether the species has been detected in the project area, potential impacts to critical habitat should also be addressed during permitting. Where there is insufficient information on current occurrences, distribution, and habitat requirements for a species known to occur in the general project area, it is generally advisable to err on the side of caution and seek incidental take permitting for that species. The ESA/CESA strategy may need to consider not only federally and State listed species, but also non-listed species including Federal candidate species and California species of special concern known to occur in the project area. These species could become federally and/or State listed at some point during the CVFPP project, so it is often advisable to account for these species such that if they were to become listed, incidental take is already avoided, minimized, and/or mitigated for and an incidental take permit can be automatically issued. The species that should be considered for permitting for the CVFPP may include, but not be limited to, those species listed in the Draft Program Environmental Impact Report (CVFPP, 2011).

Table 2 details the type of permitting available for each type of species designation. All of the permitting options are a combination ESA/CESA permitting strategies that can be used to obtain incidental take permits for both federally and State listed species. The HCP/NCCP option offers the greatest flexibility for dealing with species with differing designations, and it is the only mechanism for covering non-listed species or California species of special concern. However, in an HCP/NCCP, non-listed species must be addressed as if they were listed in order to obtain

incidental take coverage should they become listed; doing so would prevent having to obtain a permit amendment, which would necessitate a Federal Register notice, NEPA compliance, and an intra-Service Section 7 consultation. However, addressing non-listed species in an HCP/NCCP can be difficult because some non-listed species may be lacking sufficient information to address properly. Another potential drawback is that avoidance, minimization, and mitigation measures could be created unnecessarily for non-listed species that never become listed and add to the complexity or cost of ESA/CESA compliance. Therefore, selection of non-listed species for inclusion should be with careful consideration of the ESA/CESA compliance benefits, compliance costs, and effects on CVFPP activities.

Table 2. Federal and State permitting options for different species designations.

Species designation	Section 7/ CESA 2081 ITP or 2080.1 Consistency Determination	Section 10 HCP/ CESA 2081 ITP or 2080.1 Consistency Determination	Section 10 HCP/ NCCP
Federally listed only	X	X	X
State listed only	X	X	X
State Fully Protected			X
Federally listed and State listed	X	X	X
Non-listed, SSC, California Rare Plants			X
Federal Candidate	X	X	X
Federal Experimental Population	X	X	X
Federal Critical Habitat	X	X	X

Another consideration for the ESA/CESA permitting strategy is that NMFS and USFWS share responsibility for regulating federally listed species and implementing the ESA. Thus, in order to obtain ESA permits for all federally listed species that could be affected by the CVFPP project, it will be necessary to work with both agencies.

One species that will need to be specially addressed for the CVFPP ESA/CESA permitting is the experimental population of Chinook salmon in the San Joaquin River. As part of a settlement agreement to restore the mainstem of the San Joaquin River by 2025, NMFS is expected to reintroduce Chinook salmon to the San Joaquin River by the end of 2012. This population will be considered an experimental, non-essential population under Section 10(j) of the ESA, and that designation will be reassessed within 5 years. As a result of the experimental population designation, NMFS may issue comprehensive authorization of incidental take for certain activities (e.g., hydropower generation) in the San Joaquin River. If a long-term permit is pursued for the CVFPP (e.g., an HCP/NCCP), the experimental population designation may change over the life of the permit; thus, it will be important to prepare for any potential changes in status during the permitting process.

1.5 CVFPP Plan Area/ Geographic Scope

1.5.1 ESA Permitting

Section 7- Under Section 7 of the ESA, the action area is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." (USFWS and NMFS, 1998). Therefore, for separate Section 7 consultations for

individual project actions, the action area defined for each consultation would be relatively small. Alternatively, a programmatic approach to Section 7 consultations can be taken, where large-scale Federal programs are addressed on a program or regional basis; in this case the action area would be more regional. Ecosystem or regional consultations can be conducted that consider both Federal and non-Federal programs, such as the Operations Criteria and Plan (OCAP) for the Federal Central Valley Project (CVP) and California State Water Project (SWP); these types of consultations would incorporate a much larger action area. These types of consultations require a predominant Federal agency influence to serve as the lead Federal agency for the project (e.g., for OCAP it was BOR). By considering Federal and non-Federal programs simultaneously, the overall effects on species/ecosystems of multiple actions can be assessed, the roles of all parties can be better determined for conserving species/ecosystems, and all involved parties can be provided equal consideration and mutually agreed timeframes (USFWS and NMFS, 1998).

Section 10 HCP- A Section 10 HCP should cover areas "…within the applicant's project, land use area, or jurisdiction within which any permit or planned activities likely to result in incidental take are expected to occur. HCP boundaries should also be as exact as possible to avoid later uncertainty about where the permit applies or where permittees have responsibilities under the HCP." (USFWS and NMFS, 1996).

Regional/large-scale HCPs allow the permittee(s) to "…address a broad range of activities and to bring them under the "umbrella" of the permit's legal protection. They also allow analysis of a wider range of factors affecting listed species, maximize flexibility needed to develop innovative mitigation programs, and minimize the burden of ESA compliance by replacing individual project review with comprehensive, area-wide review." (USFWS and NMFS, 1996). However, there are difficulties in attempting to satisfy too many land use or endangered species issues in one effort. For example, it can be difficult to obtain consensus of multiple HCP participants, especially with an HCP that is excessively complex and may have a shortage of biological information.

One way to simplify a regional/large-scale HCP is to divide the plan area into separate planning units with different conditions and requirements for each area. However, this requires extensive coordination with individual landowners and local land use authorities to determine when subdivision of a plan area will be advantageous. The HCP handbook also notes that "the HCP plan area might also include areas necessary for the mitigation (USFWS and NMFS, 1996). The exception to this general rule may be where the mitigation consists of reserves apart from the area in which incidental take is authorized. This will entail various considerations ─ e.g., the distance from permitted activities to reserve areas and the ability of the permit applicant or its designee to regulate activities inside the reserve. Private, state, or locally-owned lands should never be considered for inclusion in HCPs as reserves without the concurrence of the landowners or their representatives." However, general areas or regions with areas suitable for preservation could be identified and potentially purchased from willing sellers.

1.5.2 CESA Permitting

2081 ITP or 2080.1 Consistency Determination – For a 2081 ITP, the applicant is simply required to describe where the project activity will be located and there are no other guidelines describing the action area or geographic scope of the project. For a 2080.1 Consistency

Determination, since it utilizes a Federal Section 7 or Section 10 HCP permit, the action area or covered area would be the same as in the Federal permit.

NCCP- The geographic scope of a NCCP must consider the natural communities, ecosystems, landscapes, and ecological processes for the species and communities that are being covered, which is a broader perspective than an HCP. Section 2820 of the Fish and Game Code indicates that "The plan provides for the protection of habitat, natural communities, and species diversity on a landscape or ecosystem level through the creation and long-term management of habitat reserves or other measures that provide equivalent conservation of covered species appropriate for land, aquatic, and marine habitats within the plan area."

1.5.3 Potential Geographic Divisions for CVFPP Plan Area

There are geographic divisions identified in the CVFPP plan area that could be used as planning units within a regional HCP or for obtaining separate ESA/CESA permits. Whether or not to subdivide into different planning units or separate permits should consider the following: the types of covered activities that are expected to occur in the different regions, the distribution of listed species and effects of specific activities and any mitigation needed to address take, and/or the entities responsible for the CVFPP activities that occur in particular regions.

Another consideration for separate geographic divisions is whether there are logical ecosystem-based divisions that could be used (i.e., Sacramento Basin and San Joaquin Basin). This would be especially useful if an HCP/NCCP permitting approach is pursued, as NCCPs are intended to conserve natural communities at the ecosystem level. However, if there are certain activities that occur in every region, it could warrant an ESA/CESA permitting approach for the CVFPP project area, at least for those activities.

There are two large planning areas identified in the CVFPP project area (Sacramento and San Joaquin basins) and a number of potential regional divisions. The regions are the preliminary Flood Protection Regions shown in the Conservation Framework. The regions could be utilized as geographic divisions for permitting.

- Sacramento Basin
    - Feather River
    - Upper Sacramento River/ Butte Basin
    - Mid-Sacramento River
    - Lower Sacramento River
    - Delta- North
- San Joaquin Basin
    - Delta-South
    - Lower San Joaquin River
    - Mid- San Joaquin River
    - Upper San Joaquin River

Another potential division is to base them on the different CMPs that will be developed for the CVFPP; these divisions may or may not be the same as the regions, but they will be based on river corridors within the CVFPP plan area. Permitting for activities by river corridor might

facilitate an ecosystem approach to permitting, as well as be a logical approach because permitting could be done as each CMP is developed.

Regional divisions based on ecosystems are a logical approach, particularly if an HCP/NCCP is pursued. This would fall in line with the CVFPP Conservation Strategy, which emphasizes conservation of ecosystem processes. An ecosystem-based approach to dividing geographic areas for permitting would probably result in some logical species groupings, because some groups of species tend to co-occur. For example, the San Joaquin kit fox and brush rabbit occur only in the San Joaquin Basin, whereas Sacramento River winter-run and Central Valley spring-run Chinook salmon occur only in the Sacramento Basin. Additional considerations include whether species are state and/or federally listed since the mechanisms for permitting differ, and whether ESA/CESA coverage is needed for unlisted species. An HCP should not appreciably reduce the likelihood of survival or recovery of listed species, hence consideration should be also given to recovery plans and how conservation can be incorporated into HCP efforts.

1.6 CVFPP ESA/CESA Permitting Participants

ESA/CESA permit-holders may include Project participants in the CVFPP, such as DWR, Central Valley Flood Protection Board (CVFPB), local/levee maintaining agencies (LMAs), DFG, and Federal agencies such as USFWS, USACE, FEMA, and BOR. DWR is the State agency responsible for managing the water resources of California in cooperation with other agencies, while the CVFPB is the State agency responsible for controlling flooding along the Sacramento and San Joaquin Rivers and their tributaries in cooperation with the USACE and other Federal, State, and local agencies. LMAs are the local districts that operate and maintain levees under their responsibility. In order to facilitate coordination between the agencies, a Memorandum of Understanding (MOU) could be established to formalize the commitment among the agencies to work collaboratively to prepare and obtain ESA/CESA permitting documents, develop the Conservation Strategy, and to define the roles and responsibilities of each agency. In addition, the local agencies (e.g., CVFPB, LMAs, and local municipalities) could form a Joint Powers Authority (JPA), which forms a single entity that can operate collectively. A JPA generally has its own board of directors, staff, funding, and powers inherent in all of the participating agencies. This collective power is greater than what can be accomplished with a MOU, as it can facilitate cost-sharing for mitigation and implementation.

For example, the JPA governing Board for the Yolo County NCCP/HCP is composed of representatives from member Agencies, which include two members of the Yolo County Board of Supervisors, one member each from the City Councils of Davis, Woodland, West Sacramento and Winters, and one ex-officio member from UC Davis. The JPA is responsible for developing and managing the NCCP/HCP, assisted by the Steering Advisory Committee and Independent Science Advisors.

1.6.1 ESA Permitting

Section 7- The lead Federal agency (i.e., the Federal agency is undertaking, funding, permitting, or authorizing actions that could affect a federally listed species) is the project participant that must initiate consultation with the Services regarding potential impacts on ESA species, and would be the permit-holder with ultimate responsibility over whether project actions and

avoidance and minimization measures fulfill the requirements of the permit. One potential ramification to being a permit-holder is if the Federal agency does not have ultimate control or responsibility over the activities performed under the permit. If project actions are executed such that the terms and conditions and incidental take described in the biological opinion are exceeded, then the lead Federal agency is responsible for violating Section 7 of the ESA, even if they did not conduct those actions. Non-Federal agencies, such as DWR, CVFPB, LMAs, private landowners, and various jurisdictions and local agencies with involvement in the CVFPP project can participate in the consultation process but would not be considered permit-holders. One exception to this is a State agency can enter into a MOU to assume the lead Federal agency's responsibilities; an example of this is the MOU between the California Department of Transportation (Caltrans) and the Federal Highways Administration (FHWA) where Caltrans assumes responsibility for ESA compliance as well as other Federal environmental laws and regulations for transportation projects. However, it may not be possible for DWR to assume Federal responsibility through an MOU with the lead Federal agency (i.e., USACE or FEMA) like Caltrans did with the FHWA, as it first requires Federal legislation. Caltrans assumed the FHWA's responsibilities through The Safe, Accountable, Flexible, Efficient Transportation Equity Act (23 U.S.C. 327)).

Section 10 HCP- For a Section 10 HCP, non-Federal participants are the permit-holders. Permit-holders could include the CVFPB, DWR, and a regional governance formed by a JPA. The CVFPP includes LMAs, multiple jurisdictions and non-Federal landowners where there is no guarantee of obtaining jurisdictional agreements for activities or mitigation that occurs outside of the CVFPP plan area. It is important that the activities being covered in a Section 10 HCP are under the control of the applicant(s)/permittee(s), and there should be efforts to include as many jurisdictions as possible. The CVFPB, landowners, LMAs, and other local agencies that are participants during HCP development can be included as permit-holders at the beginning of HCP implementation, or they can be added later after the HCP is completed, via letters of inclusion, once they demonstrate they are fulfilling or intending to fulfill the requirements of the HCP. Many HCPs are designed to allow for including additional participants, and this can generally be done at any point during the permit term. However, it benefits participants to be a part of the HCP process from the beginning so they can influence development of the HCP, whether or not they are permit applicants from the beginning or are added later.

The HCP handbook notes that "in some cases, specific landowners or industries may be reluctant to become involved in the HCP process (USFWS and NMFS, 1996). In such cases, the Service (USFWS or NMFS) should assist the remaining participants in good faith, while encouraging "sideliners" to observe the benefits of the program. Of course, "non-participants" should understand that if their activities are not addressed in the HCP, either specifically or generically, they will not be covered by the incidental take permit. Moreover, if the permit applicant is a state, regional, or local governmental agency, "non-participants" may ultimately be affected by the terms and conditions of an HCP once the permittee begins to implement the HCP through the exercise of its regulatory powers. In other cases, a landowner may elect not to participate in an HCP for other reasons— for example, if they are negotiating a separate agreement or are operating under an existing permit."

Engaging cities, counties, and landowners can be done by a steering committee during the HCP process. A MOU can be a useful way to document the expectations of the steering committee. Steering committees can be "…appointed by the permit applicant and can fulfill several roles--they can assist the applicant in determining the scope of the HCP (size of the planning area, activities to include, etc.), help develop the mitigation program and other HCP conditions, provide a forum for public discourse and reconciling conflicts, and help meet public disclosure requirements. Steering committees are particularly useful in regional HCPs, especially those in which the prospective permittee is a state or local government agency, and are recommended for these types of HCP efforts." (USFWS and NMFS, 1996). The HCP handbook provides additional guidance on the use of steering committees: "For large-scale or regional HCPs, one of the main functions of the steering committee is to build consensus among diverse organizations and interests, so it is important to promote good working relationships among committee participants." (USFWS and NMFS, 1996). In addition to a steering committee, a JPA could be formed if the agencies involved would benefit from forming a single agency with more power and funding abilities; this could be particularly useful for funding HCP implementation and mitigation and if the agencies have other collective activities and responsibilities they need to fulfill.

1.6.2 CESA Permitting

Any non-Federal or Federal entity or agency is eligible to apply for any type of CESA permit, including a 2081 ITP, 2080.1 Consistency Determination, or NCCP, and be a permit-holder.

NCCP – Section 2810 of the Fish and Game Code states that "the department may enter into an agreement with any person or public entity for the purpose of preparing a natural community conservation plan, in cooperation with a local agency that has land use permit authority over the activities proposed to be addressed in the plan, to provide comprehensive management and conservation of multiple wildlife species, including, but not limited to, those species listed pursuant to Article 2 (commencing with Section 2070) of Chapter 1.5." Thus, any entity or agency can enter into the NCCP process, as long as they are in cooperation with the local land use permitting agency.

1.7 CVFPP Permit Duration

There are three issues of duration to examine when obtaining CVFPP permits: 1) duration of incidental take, 2) duration and frequency of activities, and 3) if mitigation measures are being conducted (as in an HCP), how long it takes until mitigation measures are completed and effects are realized. Regardless of the permit type, the duration of an ESA/CESA incidental take permit only needs to encompass the duration of incidental take. However, the permitting strategy may also depend on the duration and frequency of activities and potential mitigation measures.

1.7.1 ESA Permitting

Section 7 - Permit duration for Section 7 permitting is relatively simple and only needs to encompass the duration of incidental take. For actions that are predictable and periodic and could result in incidental take over the long-term, such as periodic operations and maintenance (O&M) or emergency levee repairs or other long-term CVFPP activities, a long-term programmatic

Section 7 consultation would be the appropriate permitting strategy, especially since a Section 7 biological opinion cannot be renewed for future projects. This would prevent the need for completing repeated consultations over a number of years. According to the programmatic consultation guidance from NOAA, "…all programmatic consultations must have these three specific safeguards to ensure they remain informed, accountable, credible, and efficient: 1) an expiration date or 'sunset clause' to rescind the opinion by a specific date, typically three to five years after issuance; 2) a comprehensive program of annual monitoring and reporting to assess the level of program activity, confirm that assumptions made during consultation were correctly applied, and to ensure that effects were correctly predicted; and 3) annual coordination meetings between NOAA Fisheries and the action agency to ensure that the objective of avoiding and minimizing take from permitted activities is being accomplished, that the incidental take statement (if any) is consistent with best available science, and to discuss any action." (NOAA Fisheries Service, 2003). Although expiration dates for programmatic consultations are apparently included for NOAA consultations, this has not been found to be the case for programmatic consultations conducted by USFWS. Therefore, it is more likely that long-term programmatic Section 7 consultations can be done for USFWS-managed species while programmatic Section 7 consultations for NOAA- managed species may result in a relatively short-term permit duration.

Section 10 HCP – Although Permit duration for Section 10 HCP permitting only needs to encompass the duration of incidental take, if mitigation lands are included in an HCP, these lands are generally permanently protected and managed ("in perpetuity"). Project activities and related incidental take can be completed "up front" at the beginning of a permit term while the beneficial effects of mitigation may take many years to be realized. If there is a high level of uncertainty about future project activities, effects on listed species, or long-term funding, then a shorter permit duration may be advisable. Longer-term permits may require that more non-listed species be covered, because the longer the permit term, the more likely that non-listed species will become listed during the duration of the permit. If a non-listed species becomes listed in the future and is not covered by the HCP, and mitigation is not adequate to compensate for take, the HCP must be revised and the permit amended. This can be avoided by covering any non-listed species that could become listed during the permit term. The incidental take permit may be renewed without the issuance of a new permit if the biological circumstances and other pertinent factors affecting covered species are not significantly different than those described in the original HCP.

The CVFPP will be implemented over a period of 20 to 25 years, by 5-year phases. An update will be prepared at the end of each 5-year phase, which will be used to refine implementation for subsequent phases. Thus, CVFPP activities will be relatively well-defined in 5-year increments, and less-defined beyond 5 years. However, all activities that will be conducted for the life of the project are at least conceptually defined in the CVFPP, although most of the details (i.e., exact location, date, duration of activities) are not yet known. Despite this limitation, permits that span the entire 20-25 year project duration would prevent future delays in project activities that could occur due to permitting delays, provide regulatory certainty that project activities can proceed, and facilitate long-term coordination of minimization and mitigation measures. However, one potential drawback to this strategy, if a HCP is pursued, is that funding for CVFPP project activities, including associated mitigation actions, have long-term uncertainty in Federal, State,

and local agency budgets and cost-sharing capabilities, while funding assurances for mitigation measures within an HCP are required. There are potential solutions to this limitation; mitigation could be set up as a "pay as you go" system, where project actions and mitigation measures occur in tandem, or all of the mitigation could be secured at the beginning of the HCP permit term. The RAMP program, which is intended to create advance mitigation and conservation sites, can be used in this way.

1.7.2 CESA Permitting

Considerations for CESA permit duration are similar to those for Section 7 and Section 10 HCP ESA permit duration. Although an incidental take permit only needs to encompass the duration of incidental take, the duration of any mitigation measures that are included as part of CESA permitting (for a 2081 ITP, 2080.1 Consistency Determination, or NCCP) also need to be accounted and planned for.

2 CASE STUDIES OF LARGE-SCALE ESA/CESA PERMITTING APPROACHES

The following seven case studies are examples of ESA/CESA permitting approaches that could be applied to CVFPP ESA/CESA permitting (Table 3). Each case study was selected for its potential similarities to the CVFPP due to one or more of the following factors: 1) participants included multiple jurisdictions at the Federal, state, and local level as well as private landowners; 2) covered lands were large (i.e., 200,000+ acres to a million+ acres); 3) covered activities included O&M and/or development of water facilities; 4) covered lands were "linear" and included in-stream and riparian areas; 5) included permitting for both ESA and CESA. For each case study, attempts were made to determine if there were any major problems or litigation that surfaced after permit approval, as well as any "lessons learned" that could be applied to future CVFPP permitting. Attempts were also made to determine how other permits were obtained for the covered activities, namely Section 401 and 404 Clean Water Act permits.

Table 3. Summary of Case Studies that could be applied to CVFPP ESA/CESA Permitting.

	Federal/ State permit type	Covered lands	Covered activities	Duration	Participants
Central Valley Project-State Water Project Operations Criteria and Plan	Programmatic Section 7 consultation/ 2081 ITP and 2080.1 Consistency Determination	Sacramento, Feather, American, Stanislaus, and San Joaquin rivers, Clear Creek, San Francisco Bay, and nearshore Pacific Ocean on the California, Oregon, and Washington coasts	Operation of the Central Valley Project (CVP) and State Water Project (SWP), to divert, store, and convey CVP and SWP (Project) water.	Through 2030	BOR and DWR
East Alameda County Conservation Strategy	Conservation strategy, no permits	270,000 acres in east Alameda County	Local land use, development, infrastructure, and transportation projects	No term	Federal, state, and local entities; 3 cities
Lower Colorado River MSCP	HCP/ 2081 ITP	Millions of acres in historical floodplain of the lower Colorado River in Nevada, Arizona, and California	Power production from 6 mainstem dams, water diversions and delivery; O&M and replacement water diversion and conveyance facilities, and electrical generation and transmission facilities	50 years	State, county, and city agencies; water and power users; tribes; water and power districts
PG&E San Joaquin Valley O&M HCP	HCP/ 2081 ITP	246,350 acres in San Joaquin Valley	Routine O&M	30 years	PG&E
San Diego County MSCP	HCP/NCCP	576,000 acres in southwestern San Diego County	Development, utility lines and roads, water facilities and other public facilities, vegetation management, and agriculture	50 years	4 cities, 1 county; public agencies and private developers /landowners
Western Riverside County Multiple Species HCP	HCP/NCCP	1.26 million acres in western Riverside County	Public and private development, road maintenance, agriculture, and maintenance of public facilities	75 years	16 cities; public agencies and private developers /landowners
Draft Santa Clara Valley Habitat Plan	HCP/NCCP	519,500 acres in Santa Clara County	Urban development; in-stream and rural capital projects; in-stream and rural O&M; rural development	50 years	Santa Clara County, local water district and transportation authority, and 4 cities

Key:
HCP = Habitat Conservation Plan
ITP = Incidental Take Permit
NCCP = Natural Community Conservation Plan
O&M = Operations and Maintenance
PG&E = Pacific Gas and Electric Company
MSCP = Multiple Species Conservation Plan

2.1.1 Central Valley Project and State Water Project Operations Criteria and Plan

The Central Valley Project (CVP) and the State Water Project (SWP) are two major inter-basin water storage and delivery systems that divert and re-divert water from the southern portion of the Sacramento-San Joaquin Delta. The CVP-SWP Operations Criteria and Plan (OCAP) and associated biological opinions are described in Attachment 9E of the draft Conservation Framework. USFWS and NMFS conducted Section 7 consultations for their respective species, and DFG prepared a 2081 ITP for longfin smelt and a 2080.1 Consistency Determination for delta smelt. The BOR was the lead Federal agency for the ESA consultation for the CVP, and DWR was the lead agency for the SWP and CESA consultations.

2.1.2 East Alameda County Conservation Strategy

The East Alameda County Conservation Strategy (EACCS) is being developed by Federal, state, and local entities as a collaborative effort to preserve endangered species and guide long-term habitat protection for 270,000 acres in east Alameda County (ICF International, 2010b). The EACCS will assess areas across east Alameda County for their habitat conservation value and work with willing landowners to implement long-term conservation in the form of permanent conservation easements that would offset impacts from local land use, transportation, or other infrastructure projects. It will address 19 listed and non-listed species and their habitats. The EACCS is not a HCP and will not result in an incidental take permit; however, it is intended to provide enough guidance to streamline permitting. The project participants are not attempting to develop a HCP because they determined it was unnecessary due to the relatively low amount of planned development and potential for take, which would also affect the ability to adequately fund an HCP. The EACCS will not provide an estimate of impacts to species or their habitats during a designated period of time as an HCP would, nor will it include a specific mitigation program or funding assurances to offset those estimated impacts.

Other permits: The USFWS has agreed to prepare a programmatic biological opinion through consultation with the USACE for future projects in east Alameda County with the need for permits from the USACE. These future projects would tier off the initial biological opinion analysis if they qualify for permit inclusion. To qualify, conservation actions following the EACCS will need to be incorporated into the project design. An additional programmatic biological opinion may be developed with the Federal Highway Administration for transportation projects. Individual biological opinions, Section 10 HCP permits, and/or CESA incidental take permits may also be issued for projects in the future and it is expected that permitting for these projects will be greatly streamlined if they incorporate the EACCS in project design and implementation.

2.1.3 Lower Colorado River Multi-Species Conservation Program

The Lower Colorado River Multi-Species Conservation Program (LCRMSCP) was approved in 2005 and is a 50-year program that covers 27 species in the historical floodplain of the lower Colorado River through three states, Nevada, Arizona, and California (LCRMSCP, 2004). The main purpose of the LCRMSCP is to promote recovery of six federally protected species while ensuring the certainty of existing river water and power operations. The Colorado River is "…arguably the most regulated river in the country, and has spawned the most litigation and

controversy" over water rights and environmental issues (Pontius, 1997); thus the LCRMSCP is an attempt to reduce litigation and balance the needs of water users with the conservation of native species and habitats. Similar to the CFVPP plan area, the LCRMSCP is a "linear" HCP that covers the river, floodplain, and riparian areas only. Incidental take coverage for species listed by the State of California was covered with a 2081 Actions. There are 56 participants in the LCRMSCP, including state, county, and city agencies; water and power users; tribes; and water and power districts. Covered activities include ongoing and future power production from six main stem dams and water diversions and delivery of nine million acre-feet of water; and ongoing and future operation, maintenance, and replacement (OM&R) of water diversion and conveyance facilities (i.e., canals, facilities in the historical floodplain (e.g., bankline protection), drains (including vegetation removal), drainage wells), and OM&R of electrical generation and transmission facilities. Conservation measures in the LCRMSCP include native fish population augmentation, research and monitoring, and habitat protection and creation. The LCRMSCP took 11 years to complete (1994-2005) and total implementation costs have been estimated at $810 million, half paid by the Federal government and half paid by the other stakeholders. Funding assurances were guaranteed with a "Funding and Management Agreement" signed by all parties. As of 2010, over $92 million was spent on program implementation, development and management of conservation areas was ahead of schedule, and post-development monitoring indicated success through presence of fish and wildlife species.

Other permits: Some of the covered activities required permits under Section 404 of the Clean Water Act (CWA). It is assumed that the LCRMSCP streamlined the Section 404 permitting process, although no information was available.

2.1.4 PG&E San Joaquin Operation & Maintenance Habitat Conservation Plan

The PG&E San Joaquin Valley Operation & Maintenance Habitat Conservation Plan (PG&E San Joaquin Valley HCP) was approved in 2007 and is a 30-year HCP for routine operation and maintenance activities (Jones & Stokes, 2006). The plan area is approximately 246,350 acres and includes PG&E's gas and electrical transmission and distribution facilities, lands owned by PG&E and/or subject to PG&E easements for these facilities, private access routes to infrastructure associated with O&M activities, minor facility expansion areas, and mitigation areas for impacts resulting from covered activities. The PG&E San Joaquin Valley HCP covers 23 wildlife species and 42 plant species. Incidental take coverage for State-listed species was covered with a 2081 ITP. The PG&E San Joaquin Valley HCP includes avoidance and minimization measures, compensation for habitat loss; temporary effects are mitigated at a ratio of 0.5:1, permanent effects are mitigated at a ratio of 3:1, and habitat mitigation is expected to be approximately 43 acres per year. Funding is provided by ratepayers, and PG&E provided funding assurances by entering into land acquisition and management agreement with the Center for Natural Lands Management and placing $2.1 million into an account to cover the first 10 years of HCP implementation. The PG&E San Joaquin Valley HCP took over 5 years to complete but allows for long-term protection of habitat and species while reducing delays associated with acquiring project-by-project permits for listed species. This HCP is the first in a series of HCPs for the six regions that cover PG&E's service area; the other regions include the Bay Area, Sacramento Valley, North Coast, Central Coast and Sierra Nevada. PG&E is developing the plans to reflect the species, geography, and operational activities specific to each

region. Lessons learned from the PG&E San Joaquin Valley HCP are being applied to the other HCPs as they are being developed.

Other permits: The PG&E San Joaquin Valley HCP is expected to help simplify and streamline the Section 404 permitting process when project activities result in fill of wetlands where vernal pool species may be present. PG&E also obtained a Master Streambed Alteration Agreement from DFG. The Master Streambed Alteration Agreement is a long-term, programmatic-scale agreement that covers all O&M and minor construction activities.

2.1.5 San Diego County Multiple Species Conservation Program

The San Diego County Multiple Species Conservation Program (SDCMSCP) was approved in 1998 and covers 576,000 acres in southwestern San Diego County (City of San Diego, 1998). The SDCMSCP itself does not allow for issuance of incidental take permits. Rather, the SDCMSCP is an "umbrella" plan which provides a framework for multiple jurisdictions to develop sub-area plans and obtain incidental take permits. Each jurisdiction has certain activities covered under their incidental take permit (e.g., public works projects). Additionally, each jurisdiction can issue letters of inclusion to other entities (e.g., private developers, landowners, agriculture operators) so that those entities activities can be covered under the jurisdiction's incidental take permit. Covered activities include development, utility lines and roads, water facilities and other public facilities, vegetation management, and agriculture. Mitigation measures in the SDCMSCP include the conservation of core biological resource areas and linkages and targets 171,917 acres of vacant land for conservation. The City of Poway, County of San Diego (South County), City of San Diego, City of La Mesa, and City of Chula Vista prepared and implemented MSCP subarea plans (adopted in 1996, 1997, 1997, 1999, and 2003, respectively) with 50-year permit terms that are consistent with the main SCDMSCP. In addition, subarea plans for the City of Coronado, City of Del Mar, City of El Cajon, City of Santee, and the Otay Water District are still in progress. These subarea plans serve as an HCP/NCCP for incidental take coverage of federally- and state-listed species. The SDCMSCP evaluated 93 species; however, the subarea MSCP plans selected some of these species for coverage based on species distribution and need. Because the SDCMSCP and subarea plans only cover southwestern San Diego County, there are other HCPs and NCCPs in development that will cover the northwestern and eastern parts of the county.

Funding assurances for acquisition and management of mitigation lands were provided through projected assessments and taxes; however, the projected future costs were underestimated. As a result, The Environmental Trust, the land management company hired to manage and monitor the SDCMSCP mitigation lands, declared bankruptcy in 2005. Although the lands are still set aside for conservation in perpetuity, funds are currently insufficient to manage the lands for the benefit of the covered species. The current status and condition of the mitigation lands is unknown, but it is unlikely that these lands are meeting their management goals.

Other permits: The SDCMSCP and subarea plans only address ESA and CESA. CWA Section 404 permitting continues to occur on a project by project basis and minimization and mitigation requirements are not always consistent with SDCMSCP requirements. To allow for a more streamlined and programmatic CWA Section 404 permitting process, with minimization and measures more consistent with SDMSCP requirements, the Otay River Watershed Special Area

Management Plan (SAMP) is being developed. SAMPs, also known as Comprehensive Wetland Management Plans, can allow for more programmatic permitting at the watershed level, rather than on a project by project basis. Hence, similar to HCPs and NCCPs, SAMPS can provide for increased regulatory predictability and increased opportunities for watershed level habitat restoration and protection considerations. The actual permit connected to SAMPs is typically a Regional General Permit. Once complete, the Otay River Watershed SAMP could serve as a model for developing SAMPs in other areas where the SDCMSCP applies. In 2004, a cooperative agreement to develop the Otay River Watershed SAMP was signed by the City of Chula Vista, City of Imperial Beach, County of San Diego, and the Los Angeles District Army Corps of Engineers; however, the SAMP has not yet been completed.

2.1.6 Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (WRCMSHCP) was approved in 2003 and is the largest and most complex of the regional HCP/NCCP plans developed in southern California (Dudek & Associates, 2003). It has a 75-year permit term, covers 1.26 million acres in western Riverside County, and participants include 16 cities. Covered activities include public and private development, road maintenance, new and existing agriculture, and maintenance of public facilities, and the WRCMSHCP is intended to streamline environmental reviews and improve predictability about future Federal, state, and local regulations. It also serves as a NCCP for incidental take coverage of State-listed species. It covers 146 species. Conservation measures in the WRCMSHCP include the acquisition and management of 153,000 acres of conservation lands in a preserve. These conservation lands complement an existing 350,000-acre preserve; all of the lands are being managed and monitored together in perpetuity.

Funding assurances for the WRCMSHCP is provided by projected revenues generated from development and transportation mitigation fees, other various fees, and sales taxes. One challenge identified in the WRCMSHCP is that the ability to acquire lands is dependent on revenues generated from several local, state, and Federal sources, and there has been a gap between the timing of revenues relative to the strategy of acquiring land within a short time frame (Dixon et al., 2008). In addition, it has been determined that, due to more recent economic factors (i.e., fewer housing starts and transportation projects, sales), revenues may be inadequate to fund the plan in the long-term and new sources of revenues may be needed (Dixon et al., 2008). Based on surveys with stakeholders, the WRCMSHCP appears to have successfully streamlined and shortened the permitting process for transportation projects but has not necessarily decreased the cost of permitting.

Other permits: Some of the covered activities required or will require permits under Section 404 of the Clean Water Act and a Master Streambed Alteration Agreement with DFG. The LCRMSCP has helped simplify and streamline the Section 404 and Master Streambed Alteration Agreement permitting processes (Dixon et al., 2008). However, when the MSHCP was adopted, it was hoped that a SAMP would also be established to further streamline the permitting process for road and development projects, but this has not been developed and it is unlikely that one will be adopted in the near term (Dixon et al., 2008).

2.1.7 Santa Clara County Multiple Species Habitat Plan

The Draft Santa Clara Valley Habitat Plan (SCVHP) is a HCP/NCCP in development that is expected to be finalized in 2012 (ICF International, 2010a). It will cover 519,500 acres in Santa Clara County and 21 species, with a permit term of 50 years. Participants in the SCVHP include the County of Santa Clara, Santa Clara Valley Water District, Santa Clara Valley Transportation Authority, and four cities within the County. Covered activities will include urban development; in-stream capital projects (wastewater and stormwater management; reconstruction of levees; construction, repairs, and decommissioning of bridges, canals, culverts, and dams; and fish passage barrier removals); in-stream O&M in the riparian corridors and at dams, reservoirs, and in-stream ponds; rural capital projects (transportation projects, County Parks and Open Space Authority projects, stormwater management facilities, landfill development); rural O&M (utility line or facility O&M including vegetation and infrastructure management); rural development; and conservation strategy implementation. Conservation measures will include the acquisition, management, and enhancement of lands within a regionally connected 30,000 to 58,000-acre Reserve System; and the development of an aquatic conservation strategy to address the needs of covered amphibians and aquatic reptiles. Funding is expected to come from developer fees, wetland impact fees, and local, State, and Federal funding, placed in an endowment.

Other permits: The SCVHP will not provide permits under Section 404 of the Clean Water Act for impacts on wetlands or other waters from covered activities; however, 404 permitting is expected to be streamlined substantially as a result of the Plan.

3 RELATIONSHIP TO OTHER REGIONAL HCPS, HCP/NCCPS, AND OTHER NON-FEDERAL CONSERVATION EFFORTS

Attachment 9E of the CVFPP describes conservation objectives and planning efforts of regional and collaborative conservation plans that have geographic overlap with the CVFPP. It will be imperative for DWR to coordinate with these efforts although some are in progress while others are well developed or permitted and undergoing implementation. Integrating planning efforts may be an efficient approach, although only if conservation goals and objectives, covered activities, and covered species are shared, and if the regulatory agencies are supportive.

Most of the regional plans are being developed or implemented with JPAs, stakeholder groups, steering committees, and biological working groups. DWR should participate in the stakeholder groups at a minimum to stay informed on the progress of developing plans. For plans that have already been permitted and are being implemented, DWR should coordinate with the implementing entities or their steering committees to understand their conservation strategies so that conflicting strategies are not developed.

Several options for coordinating with these programs and plans exist, including 1) integrating CVFPP activities (on a regional basis) into the other regional HCP/NCCP efforts, either as a plan participant or through letters of inclusion to plans, or 2) conducting separate programmatic ESA strategies while coordinating with other HCP efforts to minimize conflict. It will take an investment of time and energy to determine the appropriateness of either strategy. The approach for CESA compliance in county or regional HCP efforts should also be considered, as any effort to address CESA will not be trivial.

If the Conservation Strategy develops into a system-wide regional HCP/NCCP or programmatic Section 7 consultation, then it will overlay the multiple existing or in-progress HCPs (described in Attachment 9E). Mitigation programs for the same species should be the same in adjacent HCPs, as the Services are not likely to issue more than one permit for identical activities in the same area at the same time. Where a new HCP overlays an existing one, the Services cannot seek additional mitigation from existing HCP permit holders for the same activities affecting the same species under a broad regional plan. In addition, it will be important to ensure that mitigations conducted as part of a county HCP, and potential for activities such as development, are not the same mitigations as part of a CVFPP Conservation Strategy. For example, if vegetation planting is mitigation for development of land for a county HCP and as mitigation for a CVFPP levee setback, then both entities cannot "double dip" (e.g., both cannot get mitigation credit for the same mitigation in the same place). There is a potential risk of lack of suitable amounts of conservation/mitigation lands in overlapping HCP efforts, but on the other hand coordinated conservation efforts could enhance resource values of mitigation lands. Completed regional HCPs or HCP/NCCPs that CVFPP could potentially participate in include the San Joaquin County Multi-Species HCP and Open Space and the East Contra Costa County HCP/NCCP; both of these have the ability to include third-party participants in the HCP and grant them incidental take authorization through letters of inclusion. However, it has not yet been determined if these existing HCPs would meet the goals of the CVFPP, and this would need to be explored further. There are also a number of regional planning efforts in development that the CVFPP could potentially participate in; a list of these efforts can be found in Attachment 9E.

Other considerations for determining the best approach for coordinating with other non-Federal efforts include: 1) if the other regional efforts are addressing the same species (for example, Yolo NHP is not addressing listed salmonids), 2) if the other regional efforts are addressing similar activities, 3) politics and control of decision-making (including development of minimizations, mitigations, adaptive management), 4) what stage the planning efforts are at, e.g., planning efforts that are too far along, 5) whether DWR could become a plan participant by being signatory (e.g., involved in the development of the HCP/NCCP) or through letters of inclusion, and 6) the stakeholder involvement and participation in other HCP/NCCPs, where existing conservation efforts may already include key stakeholders.

4 EVALUATION OF PROGRAMMATIC ESA/CESA COMPLIANCE APPROACHES

4.1 ESA and CESA Compliance Approaches

4.1.1 ESA Project-by-Project Section 7 Biological Opinion/ CESA 2081 ITP or 2080.1 Consistency Determination

For CVFPP actions with a Federal nexus, ESA/CESA permitting could be completed via Section 7 biological opinion for federally listed species and CESA permitting for State-listed species (2081 ITP or 2080.1 Consistency Determination) on a project-by-project basis. There are a number of potential advantages and disadvantages to consider in this approach; these are described below:

Potential Advantages:

- Could be faster in the short-term because it is easier to describe project actions and potential effects on listed species for a discrete, well-defined project.
- Could be faster in the short-term in comparison to Section 10 HCP because of the required timeframes for consultation. USFWS/NMFS is required to complete a biological opinion within 135 days of initiation if the initiation package is complete, while there is no timeframe for completing a Section 10 HCP.
- Unlike Section 10 HCP permitting, Section 7 consultations do not have to go through public review, further keeping the permitting process relatively short.

Potential Disadvantages:

- Permit terms only last for the length of potential incidental take for each project (i.e., 2-5 years) and a new consultation must be initiated for each new project. In contrast HCPs or programmatic Section 7 consultations, even for individual projects (i.e., levee maintenance and repairs) can have a permit term of many more years.
- Numerous individual consultations over the long-term may add up to a longer amount of time and higher costs of staff to complete than if a more programmatic approach was taken; for each consultation a complete initiation package (including a project description and analysis of potential effects on listed species) must be submitted up and then it takes up to 90 days to receive a biological opinion after the package is submitted whereas a programmatic Section 7 or HCP, the analysis would only need to completed once.
- Numerous individual consultations may make it more difficult to assess the cumulative effects of the actions on listed species, and could increase the risk that USFWS/NMFS eventually conclude that the actions are, cumulatively, jeopardizing the continued existence of a listed species. In contrast, if a number of actions over the long-term are permitted at once, the conservation measures could be designed such that they reduce the potential long-term and cumulative impacts to listed species.
- Does not address non-listed species so additional conservation measures and analyses may have to be conducted for non-listed species to fulfill other permitting requirements, such as those pursuant to California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).
- Differing requirements for ESA and CESA permitting (i.e., funding assurances and mitigation requirements), and may not be compatible.
- Does not facilitate a comprehensive conservation planning approach that can be gained by developing HCP/NCCPs or programmatic approaches and the corresponding potential conservation benefits of such approaches.
- Cannot use mitigation measures developed for one project to compensate for incidental take in another project. In contrast, if multiple projects are permitted together, it would be considered a single project and mitigation can be used to compensate for any incidental take that occurs in any of the projects.
- Cannot be used to obtain an ITP for State “fully protected” species.

4.1.2 ESA Programmatic Section 7 Biological Opinion/CESA 2081 ITP or 2080.1 Consistency Determination

For CVFPP actions with a Federal nexus, ESA/CESA permitting could be completed via programmatic Section 7 biological opinion for federally listed species and CESA permitting for State-listed species (2081 ITP or 2080.1 Consistency Determination). This approach can be used for longer-term, ongoing, repeated actions so an individual permit does not have to be obtained for each time the activity would occur. There are a number of potential advantages and disadvantages to consider in this approach; these are described below:

Potential Advantages:

- Could be used for multiple projects that are similar in nature.
- Can be used to take a regional or ecosystem-level approach to assessing overall effects on listed species where a larger geographic scale will provide for novel or alternative types of conservation strategies.
- Mitigation developed for one project can be credited towards incidental take associated with other projects. In contrast, if multiple projects are permitted separately, mitigation cannot be used to compensate for any incidental take that occurs in any of the other projects.
- Could be faster in the short-term because it is easier to describe project actions and potential effects on listed species for well-defined projects.
- A single programmatic consultation may add up to a shorter amount of time to complete than numerous individual consultations.
- Could be faster in the short-term in comparison to Section 10 permitting because of the required timeframes for consultation. USFWS/NMFS is required to complete a biological opinion within 135 days of initiation if the initiation package is complete.
- Unlike Section 10 HCP permitting, Section 7 consultations do not have to go through public review, further keeping the permitting process relatively short.
- May be easier to assess the cumulative effects of the actions on listed species than if consultations were conducted on a project-by-project basis. Conservation measures could be designed such that they reduce the potential long-term and cumulative impacts to listed species.

Potential Disadvantages:

- Does not address non-listed species so additional conservation measures and analyses may have to be conducted for non-listed species to fulfill other permitting requirements, such as those pursuant to California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).
- Differing requirements for ESA and CESA permitting (i.e., funding assurances and mitigation requirements), and may not be compatible.
- Cannot be used to obtain an ITP for State "fully protected" species.

Case Study Example - The CVP-SWP OCAP is an example of this approach (Section 2.1.1). The USFWS and NMFS prepared programmatic biological opinions for long-term operations (through the year 2030) of the CVP-SWP over a large geographic area of California, which overlaps with the CVFPP. The BOR was lead agency for the Federal Section 7 consultations, and

DWR was the lead agency for CESA permitting, with both a 2080.1 Consistency Determination done on the USFWS consultation for co-listed species (both State and Federally listed) and a 2081 ITP for the State-listed longfin smelt.

4.1.3 "Conservation Strategy" and ESA Project-by-Project Section 7/ CESA 2081 ITP or 2080.1 Consistency Determination

The 2017 Conservation Strategy for CVFPP-related projects that is being developed should be used to guide federally and State listed species conservation and long-term habitat protection. This document will not be used as a permitting document but will serve as a guide to streamline future permitting. For CVFPP-related projects with a Federal nexus, Section 7 consultations can tier off the Conservation Strategy. For CVFPP-related projects that may affect State listed species, CESA permitting (2081 ITP or 2080.1 Consistency Determination) can also tier off the Conservation Strategy. There are a number of potential advantages and disadvantages to consider in this approach; these are described below:

Potential Advantages:

- Facilitates a long-term planning and conservation approach while allowing the project applicant to postpone development of an HCP and/or Section 7 consultation until they are ready to address those permitting requirements.
- Mitigation developed for one project can be credited towards incidental take associated with other projects. In contrast, if multiple projects are permitted separately, mitigation credits cannot be transferred amongst projects.
- Can be used to engage landowners and various State and local agencies in conservation planning process prior to any permitting attempts.
- Can be used as a guide to streamline future ESA/CESA permitting.
- Non-listed species may also be addressed such that other permitting requirements are addressed, such as those pursuant to California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).

Potential Disadvantages:

- Although used as a guide, the document itself cannot be used to obtain an ITP for federally listed or State listed species, or State "fully protected" species; project applicants would still need to obtain appropriate ESA/CESA permits.

Case Study Example - The East Alameda County Conservation Strategy (EACCS) is an example of this approach (Section 2.1.2). The EACCS is being used by the USFWS to prepare a programmatic biological opinion for future USACE-related projects in East Alameda County, and may also be used to prepare a programmatic biological opinion for future Federal Highway Administration transportation projects. However, they are not attempting to develop a HCP due to the low potential for take and inadequate funding.

4.1.4 ESA Section 10 HCP/ CESA 2081 ITP or 2080.1 Consistency Determination

For CVFPP actions without a Federal nexus, ESA/CESA permitting could be completed via Section 10 HCP for federally listed species and CESA permitting for State-listed species (2081 ITP or 2080.1 Consistency Determination). There are a number of potential advantages and disadvantages to consider in this approach; these are described below:

Potential Advantages:

- Can be used to cover federally and State-listed species, co-listed species (both State and federally listed), and non-listed species.
- Can provide more flexibility for developing conservation strategies in that by being comprehensive and large-scale, innovative and creative solutions to minimization and mitigation can be developed.
- Suitable for a long permit duration.
- Mitigation developed for one project can be credited towards incidental take associated with other projects. In contrast, if multiple projects are permitted separately (e.g., levee O&M that includes mitigation for vegetation impacts), mitigation cannot be used to compensate for any incidental take that occurs in any of the other projects.
- HCPs have a "no surprises" policy that provides regulatory assurances that no additional land use restrictions or financial compensation will be required of the permit holder with respect to covered species, even if unforeseen circumstances arise indicating that additional mitigation is needed.
- HCPs are voluntary and applicant-driven.
- HCPs can have many participants that can be included as permit-holders at the beginning of HCP implementation, or they can be added later after the HCP is completed, via letters of inclusion.

Potential Disadvantages:

- Differing requirements for ESA and CESA permitting (i.e., funding assurances and mitigation requirements), and may not be compatible.
- Can take significant time and money to develop and implement an HCP.
- HCPs must go through a public review process, which can equate to more time to complete HCP and greater public scrutiny.
- Cannot be used to obtain an ITP for State "fully protected" species.

Case Study Example - The Lower Colorado River Multi-Species Conservation Program (LCRMSCP) is an example of this approach (Section 2.1.3). Although there is a Federal nexus for many of the actions through the BOR, they chose to develop an HCP so that ESA compliance can be provided for non-Federal agencies such as state agencies and water and power users. CESA permitting for incidental take of State-listed species was completed with a 2081 ITP.

4.1.5 Multiple ESA Section 10 HCPs/ CESA 2081 ITP or 2080.1 Consistency Determination

For CVFPP actions without a Federal nexus, ESA/CESA permitting could be completed with several Section 10 HCPs for federally listed species and CESA permitting for State-listed species (2081 ITP or 2080.1 Consistency Determination). The multiple HCPs could be created for different activities within the entire CVFPP plan area or by geographic sub-regions within the CVFPP plan area. There are a number of potential advantages and disadvantages to consider in this approach; these are described below:

Potential Advantages:

- Can be used to cover federally and State-listed species, co-listed species (both State and federally listed), and non-listed species.
- First completed HCP can be used as a "pilot" to help build the other HCPs, incorporating "lessons learned" to improve future HCPs.
- Multiple HCPs can reduce the complexity of each HCP.
- Mitigation developed for one project can be credited towards incidental take associated with other projects. In contrast, if multiple projects are permitted separately (e.g., levee O&M that includes mitigation for vegetation impacts), mitigation cannot be used to compensate for any incidental take that occurs in any of the other projects.
- HCPs have a "no surprises" policy that provides regulatory assurances that no additional land use restrictions or financial compensation will be required of the permit holder with respect to covered species, even if unforeseen circumstances arise indicating that additional mitigation is needed.
- HCPs are voluntary and applicant-driven.
- HCPs can have many participants that can be included as permit-holders at the beginning of HCP implementation, or they can be added later after the HCP is completed, via letters of inclusion.

Potential Disadvantages:

- Because HCPs can take a long time to develop, projects that result in take are still required to obtain ESA permits on a project-by-project basis.
- Differing requirements for ESA and CESA permitting (i.e., funding assurances and mitigation requirements), and may not be compatible.
- Can take significant time and money to develop and implement an HCP.
- HCPs must go through a public review process, which can equate to more time to complete HCP and greater public scrutiny.
- Cannot be used to obtain an ITP for State "fully protected" species.
- Cannot be used to address the use of pesticides and herbicides as a covered activity.

Case Study Example - The PG&E San Joaquin Valley HCP is an example of this approach (Section 2.1.4). This HCP is serving as a pilot and is the first in a series of HCPs for the six regions that cover PG&E's service area; the other regions include the Bay Area, Sacramento Valley, North Coast, Central Coast and Sierra Nevada. Lessons learned from the PG&E San Joaquin Valley HCP are being applied to the other HCPs as they are being developed. CESA permitting for incidental take of State-listed species was completed with a 2081 ITP.

4.1.6 ESA and CESA Section 10 HCP/NCCP

For CVFPP actions without a Federal nexus, ESA/CESA permitting could be completed with a Section 10 HCP for federally listed species and a NCCP for State-listed species. There are a number of potential advantages and disadvantages to consider in this approach; these are described below:

Potential Advantages:

- Can be used to cover federally and State-listed species, co-listed species (both State and federally listed), and non-listed species.
- NCCPs are the only mechanism that can be used to obtain an ITP for State "fully protected" species.
- Mitigation developed for one project can be credited towards incidental take associated with other projects. In contrast, if multiple projects are permitted separately (e.g., levee O&M that includes mitigation for vegetation impacts), mitigation cannot be used to compensate for any incidental take that occurs in any of the other projects.
- HCPs have a "no surprises" policy that provides regulatory assurances that no additional land use restrictions or financial compensation will be required of the permit holder with respect to covered species, even if unforeseen circumstances arise indicating that additional mitigation is needed.
- HCPs are voluntary and applicant-driven.
- HCP/NCCPs can have many participants that can be included as permit-holders at the beginning of HCP/NCCP implementation, or the HCP/NCCP can be structured such that permit-holders can be added later after the HCP/NCCP is completed, via letters/certificates of inclusion.

Potential Disadvantages:

- Science advisory panel required for NCCP; can increase complexity and time to develop.
- NCCPs must address ecosystem communities, not just species, which can increase the size of the plan area and complexity of mitigation measures.
- Can take significant time and money to develop and implement an HCP/NCCP.
- HCPs must go through a public review process, which can equate to more time to complete HCP and greater public scrutiny.
- Cannot be used to address the use of pesticides and herbicides as a covered activity.

Case Study Examples - The San Diego County MSCP, Western Riverside County MSCP, and Santa Clara County MSCP are examples of this approach (Section 2.1.5, 2.1.6, and 2.1.7, respectively. These are all large-scale and complex HCP/NCCPs, include multiple participants (e.g., State and local agencies, private landowners and developers), long-term permit durations (50-75 years), and a wide range of covered activities (e.g., private development, public facilities).

4.2 Key Considerations for ESA/CESA Compliance Approaches

4.2.1 Key Considerations for Section 7 Permitting

Given that many actions requiring ESA/CESA coverage associated with the CVFPP may involve discharge of dredged or fill materials into waters of the U.S., it would make sense to obtain all or most ESA permitting through a programmatic Section 7 consultation, with USACE as the lead Federal agency under Section 404 of the Clean Water Act. However, USACE has indicated that they would not assume jurisdiction of actions occurring on the landside, crown, and upper third of the waterside of the levees, or above the ordinary high water mark, which may necessitate that some project actions, such as above-water levee and vegetation maintenance, be covered via

Section 10 HCP/ESA permitting. However, it is worth noting that Section 7 consultations should consider the direct and indirect effects of an action on a species or critical habitat along with the effects of other activities that are interrelated or interdependent with that action (USFWS and NMFS, 1998). Thus, it could be argued that all levee and levee vegetation maintenance activities are interrelated and interdependent, regardless of their location in or out of the water, and the USACE should assume jurisdiction for those activities.

Section 7 consultations generally require much less investment in time and money to develop and implement than a Section 10 HCP. There are no requirements for mitigation, only avoidance and minimization measures to reduce impacts on listed species (although mitigation is sometimes included as part of the permitting package). Ongoing costs generally include those to implement the avoidance and minimization measures, and monitoring may be required to demonstrate the impacts on the species or any take that occurs. However, the duration of the incidental take permits are generally short and only last the length of the proposed project, especially if consultations are done on a project-by-project basis, necessitating additional consultations each time a project is proposed. Where a number of projects can be anticipated and described in advance, it is certainly worth the time and effort to secure either a programmatic Section 7 consultation (if there is an appropriate lead Federal agency to assume responsibility). A programmatic Section 7 consultation can be in effect for many years (i.e., 10 years or more), and each individual project that falls under the programmatic consultation will likely only need minimal additional effort to secure the permit for that particular project.

4.2.2 Key Considerations for Section 10 HCP Permitting

The requirements for Section 10 HCP permitting, in comparison to Section 7 consultation, are much greater and require a significant investment in time and money to develop and implement. The amount of time needed to develop an HCP could affect the ability to continue CVFPP project activities. For CVFPP project activities that are already ongoing, it may be necessary to ensure that appropriate ESA/CESA permitting is obtained; options for permitting may include avoiding take altogether until the HCP is completed, or securing a Section 7 consultation for activities with a Federal nexus while postponing any activities lacking a Federal nexus until the HCP is complete. The five-point policy for HCPs includes specific guidelines on: 1) biological goals and objectives; 2) adaptive management; 3) monitoring; 4) permit duration; and 5) public participation that need to be incorporated into an HCP (65 FR 35242). In addition, HCPs require that impacts on listed species are mitigated to the maximum extent practicable, and long-term funding assurances that mitigation and minimization measures will occur. There are stringent success criteria, and compliance and effects monitoring that must demonstrate that the HCP is being implemented properly and effectively. Ongoing costs include mitigation and monitoring, which can be significant. Section 10 permits do not cover herbicide and pesticide applications; these activities are generally covered by nationwide Section 7 consultations between the Environmental Protection Agency and USFWS/NMFS, and the agency using these herbicides and pesticides are responsible for complying with all applicable laws regarding their use. Baseline or existing conditions need to be determined at the start of the HCP permit duration such that take can be determined; however, the effectiveness of the HCP is measured against the biological goals and objectives (five-point policy), which are negotiated between the Service and the applicant. Therefore, there is considerable flexibility in how biological goals and objectives are met in terms of conservation strategy and mitigation measures, especially with a long-term

permit with a large geographic scale. HCPs often take several years and a significant amount of money to complete prior to implementation. However, once they are completed, the permit term can be many years; typical HCP permit terms are often 30-50 years. HCPs should be structured such that there are few circumstances that would necessitate major amendments to the HCP (common modifications include significant boundary revisions, alterations in funding or schedule, addition of a species not addressed in the original HCP), as it would require an amendment to the HCP addressing the new circumstance(s), a Federal Register notice, NEPA compliance, and an intra-Service section 7 consultation. Minor amendments (which typically include corrections in land ownership; minor revisions to survey, monitoring, or reporting protocols; and minor changes in reserve boundaries that result in no net loss of reserve land or alter the effectiveness of the HCP) to an HCP are a much easier process; generally amended administratively without amending the permit.

4.2.3 Key Considerations for CESA Permitting

Section 2080.1 Consistency Determinations do not require independent CEQA review (although the projects themselves go through CEQA review), and can be done based on a complete Section 7 consultation (biological opinion) only for species that are both state and federally listed. DFG has been using 2080.1 Consistency Determinations less as of late for several reasons, primarily because 1) in the Federal consultation, mitigations are not appropriately defined and DFG cannot add to the Federal consultation (e.g., the Federal consultation has to be complete before DFG conducts its 2080.1 Consistency Determination), 2) in a Federal consultation, plants are only included if the action jeopardizes them, which is inconsistent with CESA, 3) for CESA, incidental take must be fully mitigated, which can be a higher "bar" than mitigation to the maximum extent practicable under the Section 10 HCP permit or the "no jeopardy" clause under the Section 7 consultation process, and 4) adequate funding assurances must be identified for CESA. Consistency Determinations can also be conducted on an HCP for co-listed species.

For NCCPs, a key concern is identifying an appropriate geographic scope that addresses the NCCP Act's need to address ecosystems, landscapes, ecological processes, and communities rather than just species and habitats and because of this, DFG may not allow a NCCP to be conducted for a linear project such as CVFPP. If a fully protected species may be taken and needs an incidental take permit, the only avenue is through a NCCP.

Baseline or existing conditions need to be determined at the start of the CESA permit duration such that take can be determined; however, there is considerable flexibility in how take is mitigated for, as long as it meets the standard of "fully mitigated". There are more opportunities to meet this standard with a longer-term permit with a large geographic scale, such as with an HCP/NCCP.

5 CONCLUSIONS, RECOMMENDATIONS, AND NEXT STEPS

There is a range of alternatives that are available to DWR for ESA and CESA permitting. To determine the optimal alternatives (or combination of alternatives), the following questions must first be addressed:

1) Which CVFPP activities may result in take as defined by ESA and CESA?

2) Of the activities that may result in take as defined by ESA, which have a Federal nexus that would allow for Section 7 consultation?
3) What species will require ESA and CESA incidental take coverage and are there fully protected species that require coverage?
4) Are there logical groupings (e.g., geographic, by type of activity) for pursuing permitting mechanisms based on species distributions or categories and locations of covered activities?
5) Can DWR participate in other HCPs, HCP/NCCPs, and regional conservation plans that are being developed or implemented in the CVFPP area?
6) What level of regulatory assurances is desired and how does that balance against the need to minimize the time and costs required to obtain ESA and CESA coverage?

Each of these questions is further defined and a general process for addressing these questions and defining the permitting process is outlined below.

Which CVFPP activities may result in take as defined by ESA and CESA?
Identification of activities that need coverage (covered activities) due to their potential for incidental take of federally or State-listed species, or of fully protected species, is the first step. This is accomplished by assessing listed species distribution and habitat relative to where CVFPP activities would occur, and determining what type of CVFPP activities could result in take. Incidental take coverage only needs to be pursued for activities that could result in take of federally or State-listed species, or of State "fully protected" species.

Of the activities that may result in take as defined by ESA, which have a Federal nexus that would allow for Section 7 consultation?
Section 7 consultation is only applicable for covered activities with a Federal nexus, other activities that result in take of federally listed species must be permitted through a Section 10 HCP. Hence, early identification of activities with a Federal nexus is a practical way to determine whether or not an HCP may be necessary. However, as further described below, an HCP may be desirable because it can result in more regulatory assurances than Section 7 permitting.

What species will require ESA and CESA incidental take coverage and are there fully protected species that require coverage?
In the case of ESA, the species requiring incidental take coverage dictates the Federal agencies that will be involved (i.e., NMFS for marine and anadromous species and USFWS for other species). If there are non-listed species that DWR wishes to cover (due to concerns that the species will become listed during the CVFPP project), then a HCP/NCCP would be the appropriate permit because Section 7 consultations and 2081 ITPs do not cover non-listed species. If there are any State fully protected species where take cannot be avoided, then a NCCP may need to be pursued, because that is the only process that can provide incidental take coverage of fully protected species. Additionally, determining the species requiring coverage will allow for assessment of how the permitting process will interface with existing HCPs/NCCPs and those under development, as well as species recovery plans.

Are there logical groupings for pursuing permitting mechanisms based on species distributions or categories of covered activities?
It would be useful to assess species distributions and potential combinations of covered activities in order to find logical groupings for permitting mechanisms, if they exist. This effort may support a conclusion that a single HCP/NCCP is appropriate for all covered activities. Alternatively, it may reveal that there are logical separations between permitting processes (e.g., covering some activities through Section 7 and others through a single HCP or multiple HCPs). However, HCPs and NCCPs can provide more flexibility for developing conservation strategies in that by being comprehensive and large-scale, innovative and creative solutions to minimization and mitigation can be developed. Conversely, if some activities are covered by project-by-project Section 7 consultations, opportunities for cross-mitigation across programs and areas may be lost.

Can DWR participate in other HCPs, HCP/NCCPs, and regional conservation plans that are being developed or implemented in the CVFPP area?
DWR should explore opportunities to coordinate with other HCPs, HCP/NCCPs, and regional conservation plans where conservation goals and objectives, covered activities, and covered species are shared. This may include participating in stakeholder groups to stay informed on the progress of developing plans, integrating CVFPP activities into the other regional planning efforts, or conducting separate programmatic ESA strategies while coordinating with other plans to minimize conflict. Mitigation programs for the same species should be similar in adjacent plans, although two different HCP/NCCPs cannot claim mitigation credit for the same mitigation in the same location ("double dipping"). Completed regional HCPs or HCP/NCCPs that CVFPP could explore participating in include the San Joaquin County Multi-Species HCP and Open Space and the East Contra Costa County HCP/NCCP. There are also a number of HCPs, HCP/NCCPs, and regional conservation plans that are in development that the CVFPP may be able to participate in; these are listed in Attachment 9E.

What level of regulatory assurances is needed or desired and how does that balance against the need to minimize the time and costs to obtain ESA and CESA coverage?
Across the range of options for ESA and CESA permitting, some are more time consuming and costly to develop, but can provide more regulatory assurances (i.e., Federal HCPs and state NCCPs) while others are easier to develop but provide less regulatory assurances (i.e., Federal Section 7 consultations and State Section 2081 permitting). Costs and time associated with the development and implementation of HCPs/NCCPs tend to be much greater than Section 7 consultations because of their additional requirements, such as a science advisory panel (for NCCPs), stakeholder involvement, public review, mitigation measures, and a comprehensive conservation plan. Unlike HCPs, there are specific timelines set for Section 7 consultations. In terms of regulatory assurances, only HCPs and NCCPs provide for "no surprises" assurances, and can provide coverage of species not currently listed and incidental take coverage of fully protected species (NCCPs). Conversely, if a non-listed species becomes listed and may be affected by a project already permitted through Section 7 consultation, the Federal agency must reinitiate consultation for potential effects on the newly listed species.

Strategy for Defining the Permitting Process

Although agency and stakeholder input will be critical for defining the permitting process, it is recommended that DWR begin by internally addressing each of the questions outlined above and then expand the discussion to involve the regulatory agencies and appropriate stakeholders. The questions above can generally be addressed in order (i.e., first identify covered activities), although the overall process to answer these questions and develop the permitting strategy will be iterative. This assessment could occur in conjunction with the assembly of the working draft Conservation Strategy. As part of the development of the permitting strategy, DWR should also begin coordinating with other regional HCP efforts to determine if there is the potential to integrate efforts.

During this process, DWR should initiate discussion with the regulatory agencies (USFWS, NMFS, CDFG), as well as the agencies that may assume a Federal nexus over some of the CVFPP activities (USACE, BOR, FEMA), to ensure that there is early and close coordination and that decisions on permitting pathways are determined mutually. Since the regulatory agency staff are likely to be familiar with ongoing regional HCP/NCCP efforts, they should be able to advise whether joining other efforts would be feasible or desirable.

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